NEBRASKA

Injury Prevention State Plan

Nebraska Injury Prevention State Plan

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INTRODUCTION

Injury is a serious public health problem because of its impact on the health of people in Nebraska, including premature death, disability, and the burden on our health care system.

Injuries are one of the leading causes of death for Nebraskans of all ages, regardless of gender, race or economic status. (Table 1)

Table 1.
10 Leading Causes of Death – Nebraska – CDC
2000, All Races, Both Sexes

	AGE GROUPS									
RANK	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+
1	Congenital Anomalies 48	Unintentional Injury 6	Unintentional Injury 11	Unintentional Injury 6	Unintentional Injury 99	Unintentional Injury 53	Malignant Neoplasms 73	Malignant Neoplasms 257	Malignant Neoplasms 430	Heart Disease 3,696
2	SIDS 26	Congenital Anomalies 3	Congenital Anomalies 3	Homicide 3	Suicide 38	Suicide 26	Unintentional Injury 67	Heart Disease 158	Heart Disease 253	Malignant Neoplasms 2,584
3	Maternal Pregnancy Comp. 21	Homicide 3	Malignant Neoplasms 2	Malignant Neoplasms 3	Homicide 22	Malignant Neoplasms 24	Heart Disease 66	Unintentional Injury 72	Chronic Low. Respiratory Disease 65	Cerebro-vascular 1,011
4	Short Gestation 17	Malignant Neoplasms 3	Heart Disease 1	Suicide 3	Malignant Neoplasms 6	Heart Disease 19	Suicide 37	Suicide 39	Diabetes Mellitus 47	Chronic Low. Respiratory Disease 751
5	Atelectasis 8	Anemias 1	Homicide 1	Benign Neoplasms 2	Heart Disease 4	Homicide 10	Cerebro-vascular 15	Diabetes Mellitus 23	Cerebro-vascular 42	Influenza & Pneumonia 397
6	Unintentional Injury 7	Diabetes Mellitus 1	Influenza & Pneumonia 1	Anemias 1	Chronic Low. Respiratory Disease 3	Complicated Pregnancy 6	HIV 13	Cerebrovascular 19	Unintentional Injury 40	Alzheimer's Disease 350
7	Placenta Cord Membranes 6	Meningo-coccal Infection 1		Cerebro-vascular 1	Congenital Anomalies 3	Diabetes Mellitus 4	Diabetes Mellitus 12	Liver Disease 19	Liver Disease 24	Diabetes Mellitus 323
8	Neonatal Hemorrhage 5	Perinatal Period 1			HIV 2	HIV 3	Homicide 12	Chronic Low. Respiratory Disease 14	Nephritis 24	Unintentional Injury 279
9	Bacterial Sepsis 4				Influenza & Pneumonia 2	Influenza & Pneumonia 3	Liver Disease 9	Homicide 10	Influenza & Pneumonia 18	Nephritis 219
10	Labor/ Delivery Complications 3				Aortic Aneurysm 1	Cerebro-vascular 2	Influenza & Pneumonia 6	Nephritis 6	Suicide 18	Athero-sclerosis 159

Produced by: *Office of Statistics and Programming, National Center for Injury Prevention and Control, CDC.*

Data Source: *National Center for Health Statistics (NCHS) Vital Statistics System.*

Note: *Numbers listed below causes are actual deaths.*

Injury deaths are only part of the picture. Many Nebraskans are injured each year and survive. For many of them, the injury causes temporary pain and inconvenience, but for some, the injury leads to disability, chronic pain, large medical bills, and a profound change in lifestyle.

An injury affects more than just the person injured—it affects everyone who is involved in the injured person's life. With a fatal injury, family, friends, coworkers, employers, and other members of the injured person's community feel the loss. In addition to experiencing grief, they may experience a loss of income or the loss of a primary caregiver, as well.

With a nonfatal injury, family members are often called upon to care for the injured person, which can result in stress, time away from work, and possibly lost income. Society at large is also profoundly affected by injuries. The financial costs of injuries include direct medical care, rehabilitation, lost wages and lost productivity.

Injuries are preventable—they do not occur at random. People tend to see unintentional injuries as happening as a result of unpreventable "accidents", when in fact, most injuries are predictable and preventable.

Table 2 shows the 10 leading external causes of injury resulting in hospital treatment in Nebraska. It also shows the ranking of the injury causes for inpatients, outpatients, and average length of stay.

Table 2.
Top 10 Causes of Injury Resulting in Hospital Treatment, Nebraska, 2001

			Outpatient		*Inpatient*		*Inpatient Hospital Stay*		
							Total Number of Days	*Average Number of Days*	
Rank	*Cause*	*Total*	*Number*	*Rank*	*Number*	*Rank*		*Number*	*Rank*
1	Fall	41,914	37,373	1	4,541	1	23498	5.2	5
2	Struck by, against	22,196	21,904	2	292	4	949	3.3	6
3	Unspecified	15,497	15,205	3	292	5	1610	5.5	3
4	Motor vehicle traffic	12,974	11,859	5	1,115	2	6516	5.8	2
5	Overexertion	12,616	12,445	4	171	6	549	3.2	7
6	Cut/pierce	11,673	11,524	6	149	8	448	3.0	8
7	Other specified & classifiable	7,730	7,577	7	153	7	816	5.3	4
8	Fire/Burn	3,322	3,176	8	146	9	1294	8.9	1
9	Poisoning	2,743	1,990	10	753	3	1717	2.3	10
10	Bites and sting	2,726	2,688	9	38	10	107	2.8	9
	Total Top Ten %	133,391 93.78	125,741 93.96		7,650 90.91		37504	4.9	
	Total Injuries – All Causes	142,237	133,822		8,415				

Source: NE Hospital Discharge Data, 2001

Background

In October 2000, Nebraska Health and Human Services was awarded a four-year grant from the Centers for Disease Control and Prevention for "Core State Injury Surveillance and Program Development". In September 2001, an Injury Prevention Advisory Committee was convened to help guide the program in developing a state plan for injury prevention. Members who were asked to serve reflect a broad base of injury prevention and control.

The Nebraska Injury Prevention State Plan focuses on ten major categories of injuries. They include: falls, poisoning, motor vehicle/traffic, fire and burns, childhood injuries, older adult injuries, sexual assault, domestic violence, suicide, and traumatic brain injuries. These were selected by the Advisory Committee based on available data. Subcommittees were formed to assist in writing each of the ten chapters of the plan.

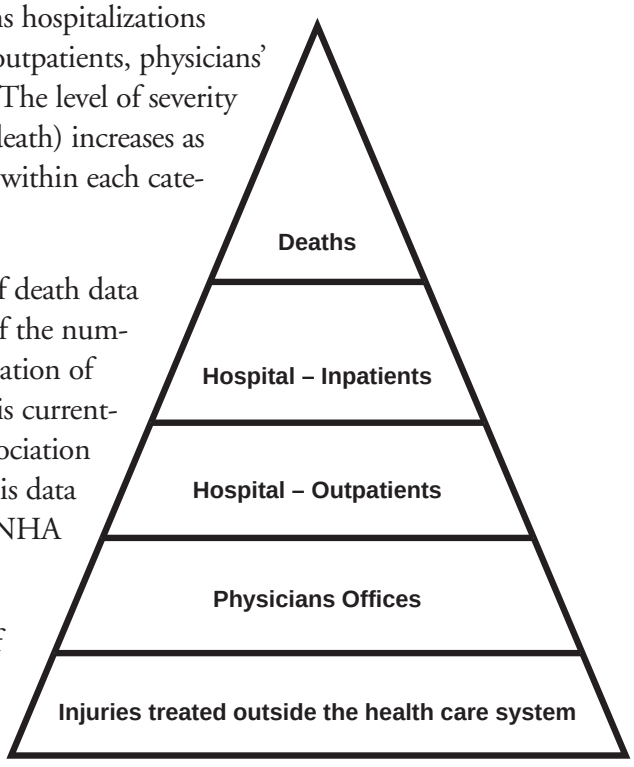
Each chapter includes a statement of the problem, the significance of the problem, trends, contributing factors or factors that impact, possible solutions, and recommendations. Data to describe the statement of the problem are included when available. Most of the data is from Hospital Discharge Data as described below. Other data was included as noted in the chapters.

The chapters had at least two issues in common: the need for more and/or more complete data, and the need for funding for prevention.

Data

The overall goals of the Nebraska Health and Human Services System (NHHSS) Injury Prevention and Control Program are to conduct injury surveillance, plan, implement and support prevention and interventions aimed at reducing the number and/or severity of injuries. In order to accomplish these goals, data is needed that accurately reflects the number and severity of injuries not only statewide, but also at the local level. As each chapter was written, a need was expressed for more data and/or more detailed data to describe the injury problems in Nebraska; for example, knowing the location of a fall. Many injuries were coded as unspecified as shown in Table 2; knowing the causes of these injuries would also help give a clearer picture of injuries in Nebraska. There is also a need for data that identifies the racial/ethnic background of those injured; currently this is not available. This would help in developing solutions and recommendations that are specific to a variety of target populations.

A long recognized issue within the field of injury prevention is the fact that injury data tends to take the shape of a pyramid, where the top of the pyramid contains death data due to a particular injury (motor vehicle crashes, poisoning, suicides, etc.) The next level contains hospitalizations (inpatients) due to injury. Lower levels consist of hospital outpatients, physicians' offices, and injuries treated outside the health care system. The level of severity (from the inconvenience of a minor cut to the tragedy of death) increases as we go up the pyramid. Conversely, the number of injuries within each category increases as we go down. (Figure 1)



As the picture illustrates, the gathering and analysis of death data for injuries only touches the "tip of the iceberg" in terms of the number and severity of injuries in Nebraska. This led to the creation of the Nebraska Hospital Discharge Database. The NHHSS is currently working in cooperation with the Nebraska Hospital Association (NHA) and its member hospitals to gather injury data. This data contains patient information provided by hospitals to the NHA who compile and store it.

This document uses data from the top three levels of the injury pyramid; namely, deaths, inpatient hospitalizations, and people treated in hospitals as outpatients or ambulatory surgery. The data does not include individuals treated solely in physicians' offices, urgent care clinics, or other locations that may offer limited injury treatment (e.g. school nurses' offices). The injuries that are included are those that required medical treatment, and cost Nebraskans in terms of time away from work, time away from family, disability, death, and charges paid by individuals, insurance, Medicare, or Medicaid.

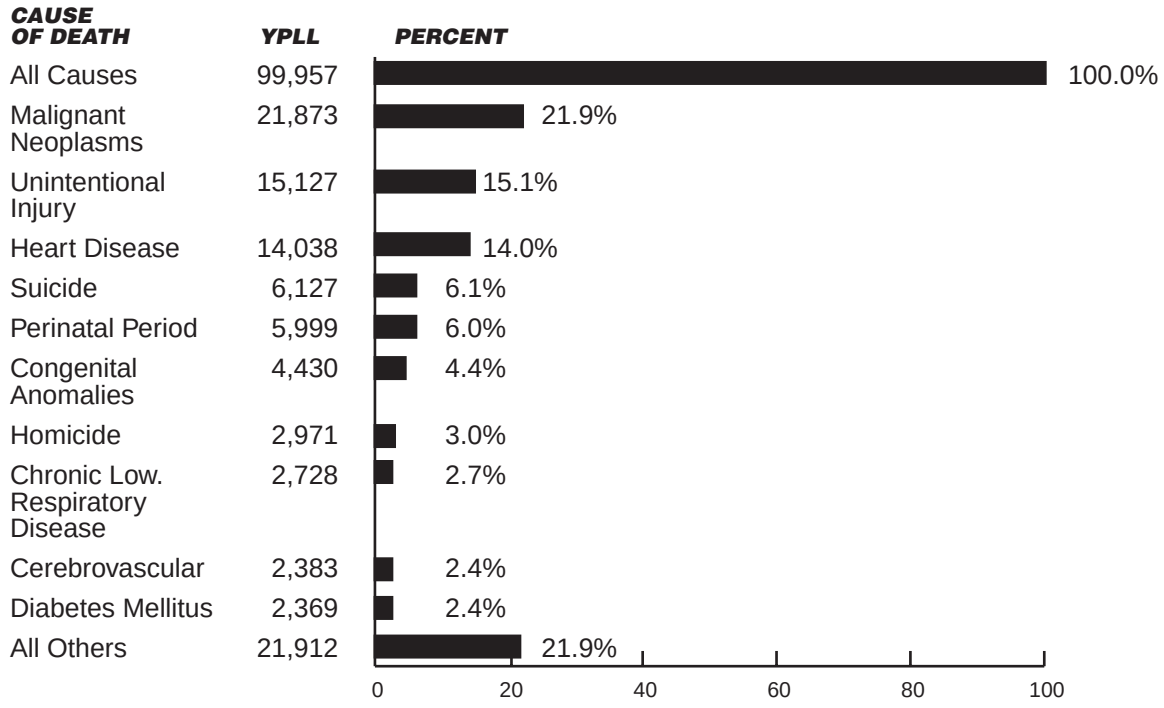
Much of the data that is included in this document is given as rates per 100,000 population. Some of the data that are included are reported as frequencies; these are the actual numbers of injuries. Rates may give a clearer picture of the risk of injury in a demographic category; for example males age 10-14 years. It is important to note whether rates or frequencies are reported.

Years of Potential Life Lost

Years of potential life lost is one measure of premature death. Assuming 75 years of potential life as the basis, infants who die before their first birthday have lost 74.5 years of potential life; a person dying at age 50 years has lost 25 years of potential life. Therefore, the younger the age of the person at death, the more years of potential life are lost. Since injury victims are generally younger than persons dying from other leading causes of death such as heart disease or cancer, the number of years of potential life lost due to injuries is very high.

Unintentional injury was the second leading cause of years life lost for Nebraskans in 2000. Suicide ranked as the fourth leading cause of years life lost.[1]

Chart 1.
2000 Nebraska Years of Potential Life Lost (YPLL)
Before Age 75
All Races, Both Sexes, All Deaths

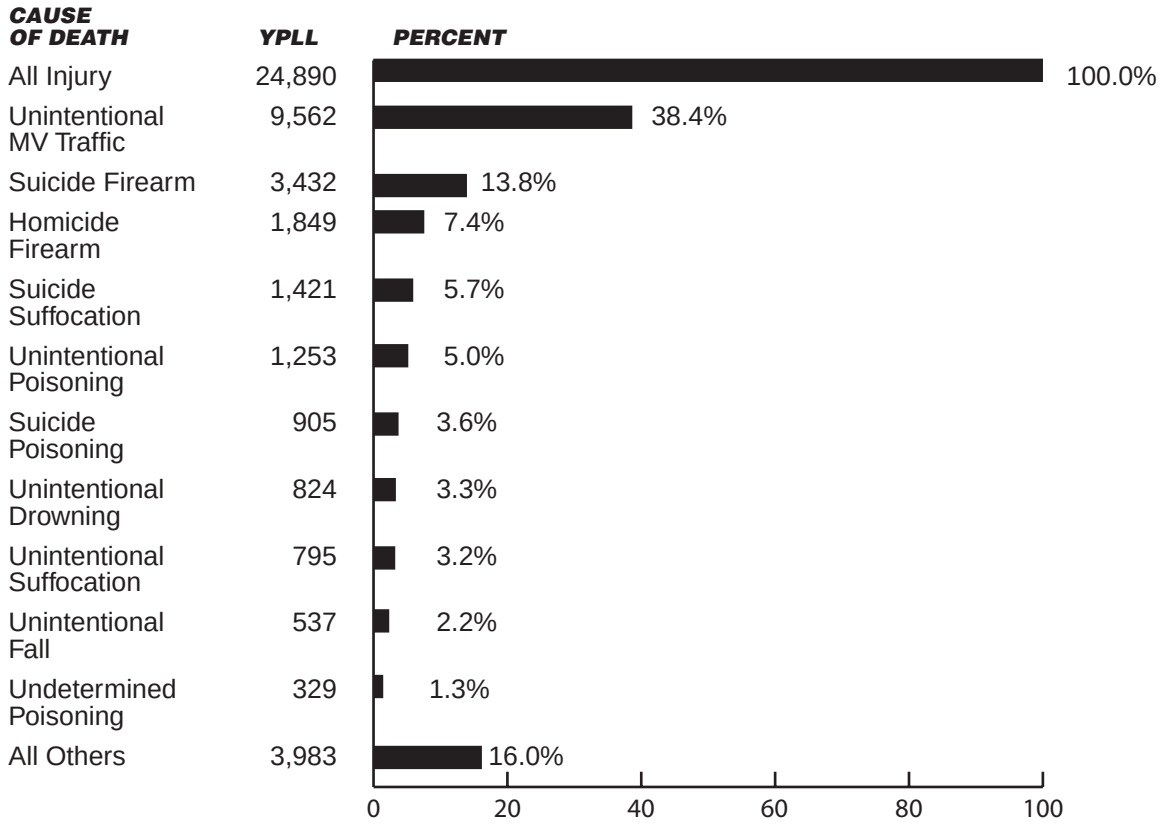


Produced By: *Office of Statistics and Programming, National Center for Injury Prevention and Control, CDC*

Data Source: *National Center for Health Statistics (NCHS) Vital Statistics System.*

Of all injury causes, motor vehicle/traffic related injuries were the leading cause of years life lost for Nebraskans in 2000.

Chart 2.
2000 Nebraska Years of Potential Life Lost (YPLL)
Before Age 75
All Races, Both Sexes, All Injury Deaths



Produced By: *Office of Statistics and Programming, National Center for Injury Prevention and Control, CDC*

Data Source: *National Center for Health Statistics (NCHS) Vital Statistics System.*

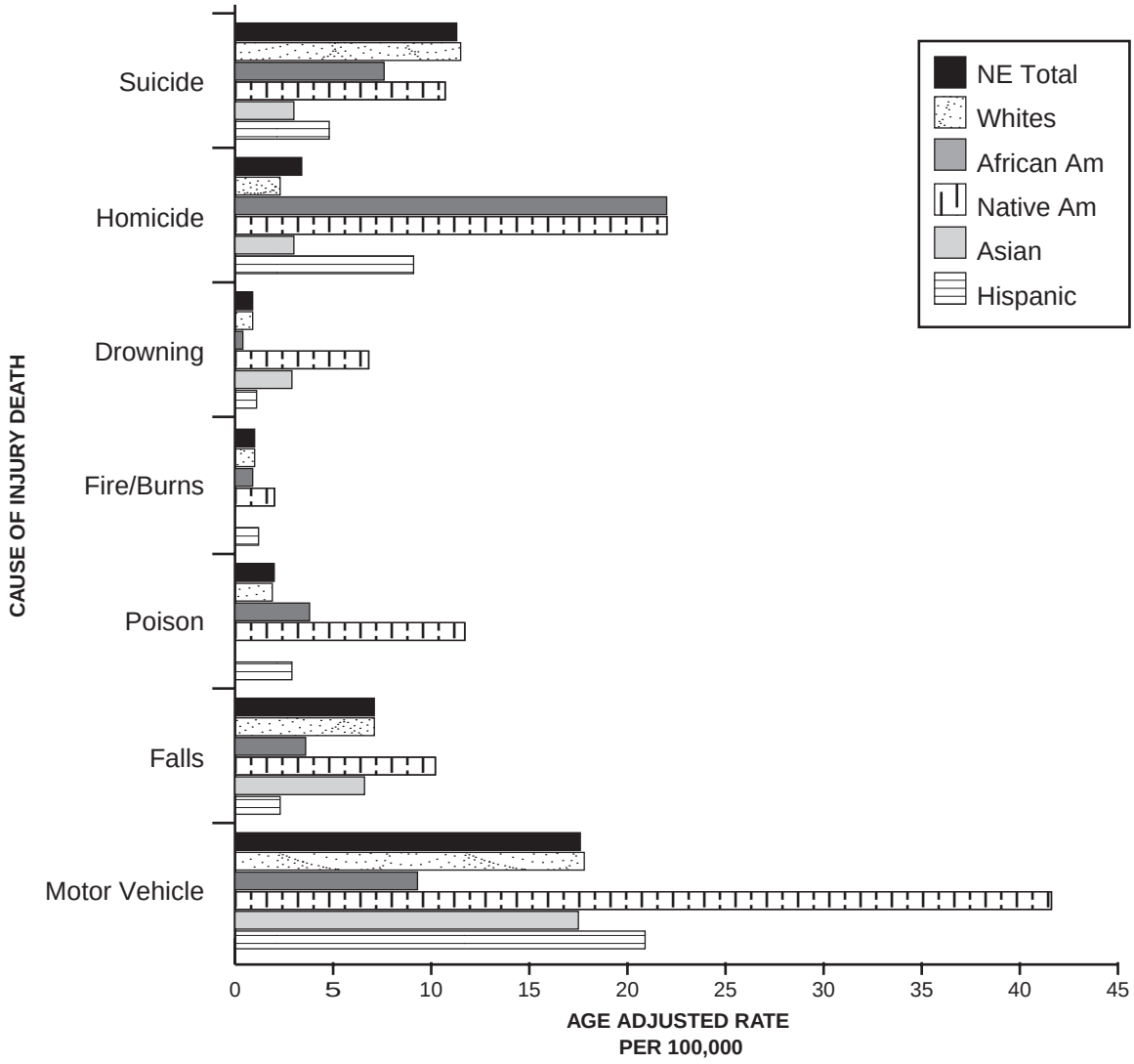
Racial and Ethnic Minorities

Injury data specific to racial and ethnic minorities in Nebraska are not available at this time. This makes it difficult to identify solutions or prevention recommendations targeted at racial and ethnic minority populations. Death data shows that some racial and ethnic minorities are significantly overrepresented in death rates due to unintentional injuries.

Racial and ethnic disparities in unintentional injury rates have more to do with living in impoverished communities, a primary predictor of injury, than with biological differences.[2] Unintentional injuries were the fifth leading cause of death among all Nebraskans in 2000. Although unintentional injuries were the fifth leading cause of death for white Nebraskans, they ranked third among Native Americans and Hispanic Americans for the period 1999-2000. The unintentional injury death rate for Native Americans in Nebraska was more than twice as high as the rate for whites.[1]

Motor vehicle fatality rates for Native Americans in Nebraska were more than double the rate for white residents for the period 1997 – 2001. Hispanic Americans also had a higher rate, while African Americans and Asian Americans had lower rates of motor vehicle fatalities.[3]

Chart 3.
Nebraska Injury Mortality Rates
1997 – 2001



Source: NHHS Vital Statistics, 2001

In Nebraska, Native Americans had by far the highest rate of years of potential life lost (YPLL) due to injuries for the period 1997 – 2001. Their rate was triple the rate of white persons in the state. Hispanic Americans in the state also experienced a higher rate of YPLL due to injuries than the white population.[3]

Agricultural Injuries

Nebraska is a rural state with many individuals involved with agriculture and the agriculture industry. Each year, individuals of all ages are injured in agriculture-related incidents. Nationally, agriculture ranked

second behind the mining/quarrying industry in work-related fatalities.[4] Data that are currently available do not specify agriculture-related injuries, which makes it difficult to identify solutions and recommendations. Injury data on general injury causes such as falls, fires, etc., that occur in agriculture-related settings are included in the total numbers for those injury causes. Current data does not indicate the place of the occurrence of the injury, so it is unknown how many are agriculture-related.

Fatality data indicate that in 2001 agriculture-related incidents were the third leading cause of unintentional injury death in Nebraska.[4] For the period 1993 – 2003, the leading causes of agricultural fatalities included tractor overturns, crushing, being run over, suffocation, ATVs, traffic, and animal-related injuries. The University of Nebraska-Lincoln Extension Safety Program reports that the leading causes of agriculture related injuries are animal and machinery related. Generally, fatalities are caused by incidents with tractors and machinery; injuries are related to incidents with animals.[5]

More specific data about agriculture-related injuries is necessary to identify prevention strategies and recommendations.

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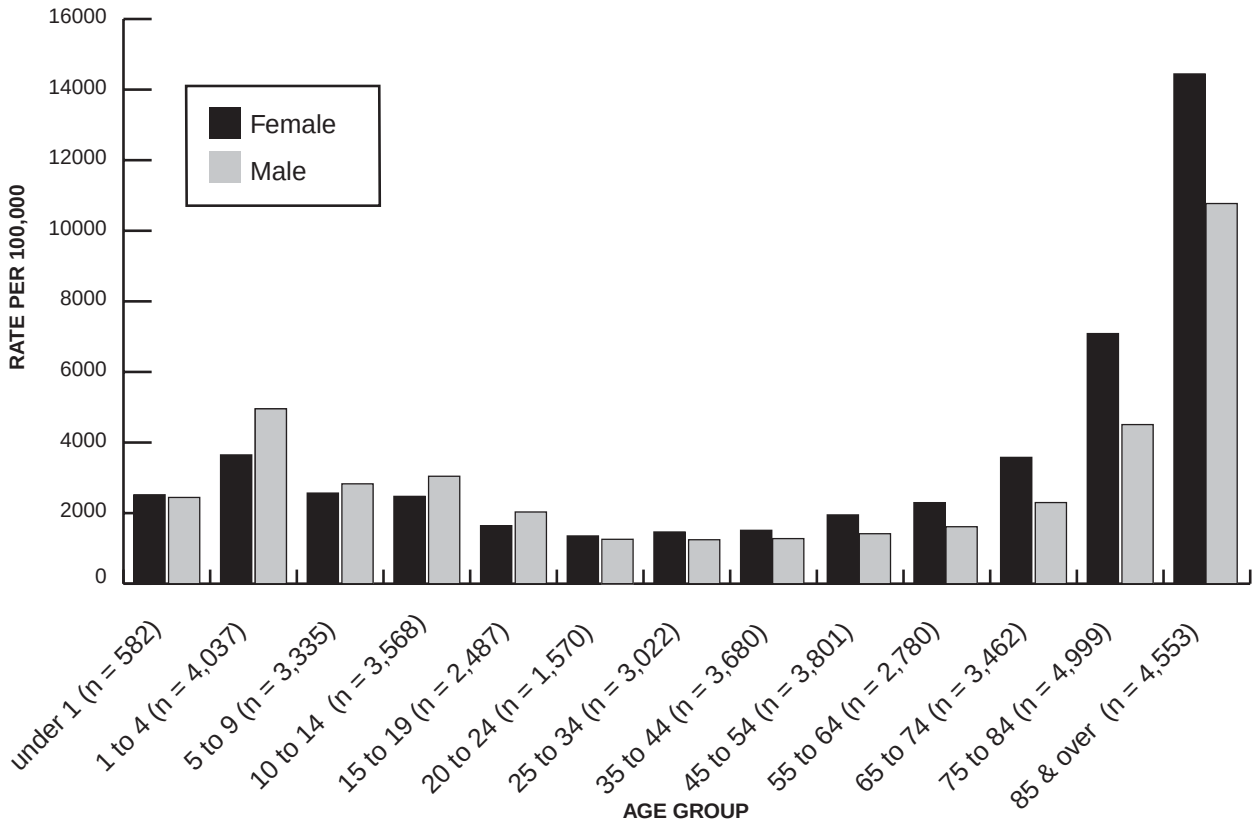
FALLS INJURIES

Statement of the Problem

In Nebraska, falls are the leading cause of all injury hospitalizations and outpatient visits.[1] Falls rank second only to motor vehicle fatalities as a cause of unintentional injury deaths.[2]

Males and females age 85 and over have the highest rate of fall injuries. Rates increase dramatically beginning at age 65. Males age 1 to 4 also experience high rates of fall injuries. (Chart 1)

Chart 1.
Falls Injuries – Nebraska 2001
Discharge Rates by Age and Gender



Source: NE Hospital Discharge Data, 2001

Significance of the Problem

The death rate due to falls in Nebraska was 6.3 per 100,000 population in 2000, considerably higher than the rate for the United States overall (4.83).[2]

Falls are the leading cause of injury for Nebraska children in age groups 1 to 4 years and 5 to 9 years.[1]

- Nationally, falls cause the majority of deaths and severe injuries from head trauma for children under age 14 years.
- Nine out of ten of the most severe playground injuries treated in hospital emergency departments, as well as about one-third of the playground deaths, are caused by falls.

For older adults, age 65 and older, the most serious fall-related injury is hip fracture.

- At least three-fourths of hip fractures occurred among women.
- National statistics show that nearly one-fourth of all hip fracture patients age 50 and older die in the 12 months following the fracture.
- Hip fractures are also a frequent cause of disability, with about half of all older adults who were hospitalized for hip fracture unable to return home or live independently after the fracture.[3]
- Nationally, falls were the second leading cause of spinal cord injury and brain injury among persons age 65 and older.[3]

In Nebraska in 2000,

- Approximately 75% of the hospital inpatient charges for fall injuries were paid by Medicare.
- 33% of patients with fall-related injuries were hospitalized for 6 – 9 days; 12% were hospitalized for 10 days or longer.
- Approximately 78% of those hospitalized for fall-related injuries were 65 years or older; 67% were female.[4]

Trends

Nationally, the death rate from falls among children age 14 and under declined 28 percent from 1987 to 1998. However, falls remain the leading cause of unintentional injury for children. Children ages 14 and under account for one-third of all fall-related visits to hospital emergency rooms. More than half of all nonfatal injuries to children are associated with falls.[5]

In general, children age 10 and under are injured from falls at a rate about twice that of the total population. Preschoolers are at the greatest risk.[5]

Approximately one-third of people age 65 or older who live in their own homes fall at least once a year.[6]

Falls are the most common cause of injuries and hospital admissions due to trauma for older adults. Most fractures experienced by people in this age group are the result of falls.[3]

Contributing Factors

- Infants are at greater risk from falls associated with furniture, stairs, and baby walkers.
- Toddlers are at risk from window-related falls.
- School-age children tend to suffer from playground equipment-related falls.
- Playground surfaces and unsafe playground equipment may contribute to injuries related to falls in children.[5]

More than 80 percent of fall-related injuries among children age 4 and under occur in the home. Among older children, age 5 to 14, 45 percent of fall-related injuries occur in the home and 23 percent occur at school. The majority of falls occur between noon and early evening, the most common playtime for children.[5]

Factors contributing to falls among older adults include:

- dementia
- visual impairment
- disabilities related to the central nervous system and motor abilities
- medications
- difficulties with gait and balance.[3]
- osteoporosis
- environmental hazards in the home including
  - poor lighting
  - loose carpets
  - clutter
  - lack of bathroom safety equipment (such as handrails)
  - lack of handrails on stairs
  - inappropriate footwear.

Possible Solutions

For children:

- Educate parents and other child care providers on the following points:
  - Never use babywalkers on wheels. Use stationary activity centers or walker alternatives.
  - Use safety gates at the top and bottom of stairs if there are infants or toddlers in the home.
  - Move chairs and furniture away from windows. Consider installing window guards on windows located on the ground floor and up, unless designated as emergency fire exits.
- Protective surfacing under and around playground equipment can prevent the incidence and reduce the severity of fall-related injuries.

For the older adult population:

- Home safety assessments
- Safety assessments at senior centers, assisted living facilities and independent living facilities
- Medication management
- Proper shoes
- Gaining acceptance in using adaptive devices (durable medical equipment such as handrails.)

Recommendations

1. **Increase public education on fall hazards for children and older adults.**

   Falls are the leading cause of hospitalization due to unintentional injury for children and older adults. They are the leading cause of unintentional injury death among people 65 years and older.

2. **Encourage schools, childcare centers, and communities to establish a schedule for regular inspection and maintenance of playground equipment and to provide instruction to children on playground safety.**

   The National Program for Playground Safety gave Nebraska a "C" grade for safe playgrounds.[7] Many communities and households have outdated playground equipment that contributes to the risk of injuries.[8]

3. **Provide training on fall prevention for medical professionals including home health providers.**

   For adults 65 years old or older, 60% of fatal falls happen at home.[3] Home health providers and other medical professionals could review hazards to help make living areas safer.

4. **Decrease the number of falls resulting in injury through public awareness campaigns.**

   Each year in the United States, one person in 20 receives emergency department treatment because of a fall.[3] Public awareness campaigns targeting seasonal hazards should address fall hazards and remind individuals that most fall injuries are preventable.

5. **Increase the awareness and diagnosis of osteoporosis through education, screenings, and assessments.**

   Of Nebraska women age 60 and older who were hospitalized for a fall that resulted in a hip fracture, approximately 20% were noted to have osteoporosis.[4]

6. **Encourage environmental assessments in homes, home childcare and childcare centers, senior centers, and assisted living facilities.**

   Environmental hazards play a role in falls. Review of these hazards may reduce the risk of falling.

7. **Establish a data collection system to provide more detail that would aid in targeting prevention strategies.**

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Motor Vehicles / Traffic-Related Injuries

Statement of the Problem

Motor vehicle crashes are the leading cause of death for persons ages 4 through 33 years.[1] During 2001, 246 persons died and 26,751 were injured in traffic crashes in Nebraska. The number of fatalities increased to 307 in 2002.[2]

- In 2001, 38% of fatal crashes in Nebraska involved alcohol.
- Thirty percent of motor vehicle occupants in Nebraska did not wear seatbelts in 2001. Of persons who were killed in motor vehicle crashes, 72% were unbelted.
- There were 431 pedestrian-involved crashes in Nebraska in 2001; the number of fatal pedestrian crashes was 10. There were 302 bicycle-involved crashes resulting in 5 fatalities.
- In 2001, the number of motorcycle crashes in Nebraska was 336; 11 of these crashes resulted in 12 fatalities.[2]

In 2002, 30% of Nebraska children under the age of 6 were observed riding unrestrained, even though Nebraska has a primary enforcement child safety seat law.[3] Of the children who are restrained in child safety seats or booster seats, 92% were restrained incorrectly.[4]

Significance of the Problem

In Nebraska, the Department of Roads estimates the economic loss due to motor vehicle crashes in 2001 to be $1,944,458,500.[2]

Motor vehicle crashes are the largest cause of years of life lost in Nebraska. In 2001, 9,595 years of potential life were lost due to motor vehicle crashes.[5]

During 2001: One crash occurred every 11 minutes. Seventy-three persons were injured each day. One person was killed every 36 hours.[2]

Alcohol, as measured by Blood Alcohol Content (BAC), is a factor in 22% of costs associated with crashes in Nebraska. Alcohol-related crashes in Nebraska cost the public more than $0.7 billion in 1999. Costs associated with crashes in Nebraska averaged:

- $5.70 per mile driven at BACs of .10 and above
- $2.50 per mile driven at BACs between .08 and .09
- $0.10 per mile driven at BACs of .00

Nebraska's BAC legal limit is .08 as of September 1, 2001. Prior to that it was .10.

Reducing alcohol-related crashes by 10% would save $13 million in claims payments and loss adjustment expenses.[6]

In the United States, alcohol-impaired driving resulted in more than 16,000 injuries and claimed an average of 463 lives among child passengers age 14 years and younger. A Journal of American Medicine (JAMA) study showed that 65% of children killed and 39% of children injured were passengers in cars with alcohol-impaired drivers. Children riding with alcohol-impaired drivers were also less likely than other children to be wearing seat belts or be restrained in car seats.[7]

Trends

Occupant restraint use and safety belt laws

- Safety belt law (secondary enforcement) took effect in 1985: usage rate 45%
- Safety belt law repealed in 1986: usage rate 29%
- Safety belt law took effect in 1993: usage rate 54%
- Safety belt usage rate in 2002: 70%[8]

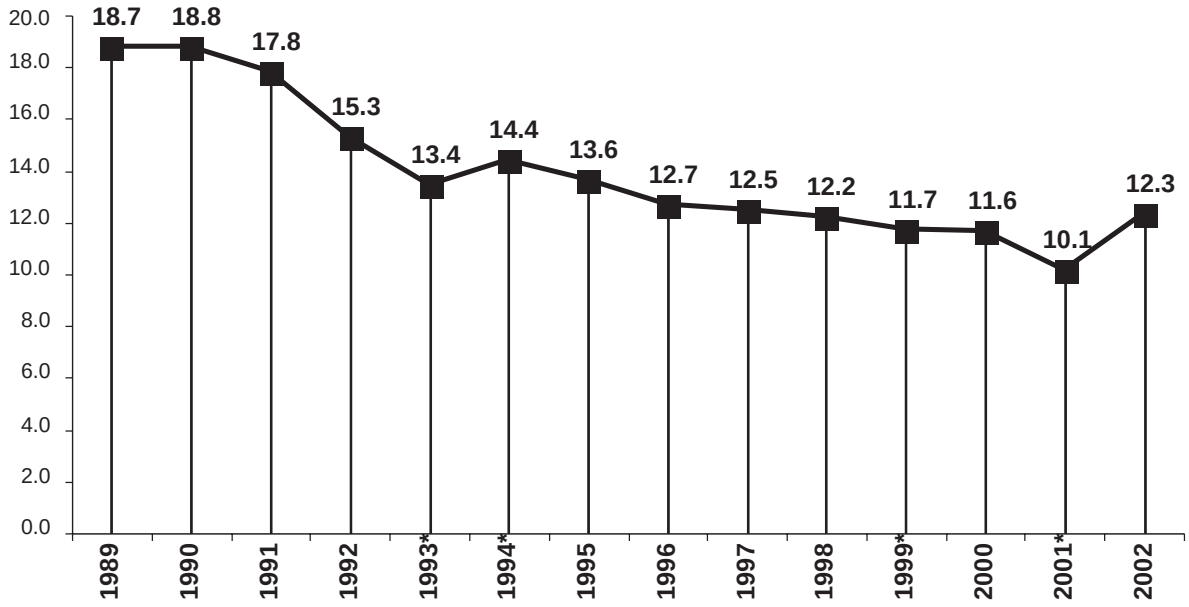
Safety belt usage has increased in recent years. Although not as effective as a primary (standard) enforcement law, indications are that the secondary enforcement law helps promote seat belt use. Data from other states show that a primary safety belt law increases usage rates dramatically.

Public education and enforcement in the area of child passenger safety has increased significantly in recent years. Usage rates have also increased; the observed rate for 2002 was 69.6%, the highest rate since this observational survey began.[8]

Alcohol-related crashes

The Nebraska Office of Highway Safety reports that Automatic License Revocation (ALR) and the .08 Blood Alcohol Content (BAC) law resulted in significant decreases in alcohol-related crashes immediately following their adoption. (Chart 1)

Chart 1.
Nebraska Alcohol-Related Crashes per 100 million miles traveled



EFFECTIVE DATE OF NOTEWORTHY HIGHWAY SAFETY LEGISLATION

*January 1, 1993	Administrative License Revocation (ALR) Law
*January 1, 1994	.02 BAC (Zero Tolerance) Under 21 Drivers
*August 28, 1999	Open Container Law
*September 1, 2001	.08 BAC Law

Provided by: Nebraska Office of Highway Safety – DMV, 301 Centennial Mall South, Lincoln, NE 402/471-2515
Updated 5/15/03

.08 BAC Law

- Effective September 1, 2001
- The average BAC level of drivers involved in fatal crashes with BAC's greater than .01 was .148 (lower than the previous 10 year average of .151)[8]
- Research by the Insurance Institute for Highway Safety indicates that the relative risk of being killed in a single vehicle crash at .08 is eleven times that of drivers at .00 BAC.

A Nebraska CODES study indicated that most alcohol-impaired drivers were either male or under age 45. Most (89%) alcohol-impaired drivers killed in crashes were not wearing safety belts when crashes occurred.[9]

Older drivers

- Compared to younger people, older adults drive fewer miles per licensed driver.

- Older adults are generally more susceptible to complications from crash injuries and are thus more likely to die from their injuries.
- The death rate for drivers in this age group is approximately 9 times higher than the rate for drivers age 15 to 69.[10]

Younger drivers are involved in a disproportionate number of crashes.

- In 2001, 53% of the drivers in crashes were age 34 or younger.
- The youngest drivers, age 15 to 24 years, accounted for a greater proportion of crashes in general (34%) and of fatal crashes (26%) than any other age group.
- Nearly 67% of all injuries are suffered by drivers and passengers between the ages of 15 and 44.[2]
- A study published in JAMA found that the presence of passengers in vehicles driven by teens significantly increased the driver's risk of being killed in a crash, compared to a teen driver who was alone in the car.[10]

In Nebraska, a graduated licensing law went into effect January 1, 1999. It requires teens that are 16 or 17 years of age to apply for a Provisional Operator's Permit (POP). This permit restricts the hours and circumstances when these teenagers are allowed to operate a motor vehicle by themselves. Data collected from 1998 through 2001 show that the numbers of crashes involving 15, 16, and 17-year-old drivers have all declined since the POP law was implemented.

- For drivers age 15, the total reported crashes have declined by 14.6%.
- Drivers age 16 have experienced a 29.6% decline in their crash rates.
- Drivers age 17 have exhibited a 13.9% decline.[8]

Motorcycle helmet law

- Effective January 1, 1989.
- Injuries and crashes have decreased while the numbers of licensed drivers and registrations have increased.
- Prior to 1989, motorcycle fatalities averaged 24.8 per year (for the 5-year period 1984–1988).[8]
- After 1989, the average number of fatalities declined to 9.8 per year for the period 1989–1993, and further to 8.8 per year for the period 1998–2002.[8]
- Annually, legislation is introduced to repeal the motorcycle helmet law.

Contributing Factors

Occupant restraint use

Restraint usage is the best available means of preventing fatalities and injuries in motor vehicle crashes. Safety belts cut the risk of death or serious injury in a crash by 45 to 50 percent.[11]

- Men in Nebraska are much less likely than women in the state to report using a safety belt. Male drivers are also more likely than female drivers to be involved in motor vehicle crashes. In Nebraska, males were the drivers in 58% of all crashes and in 76% of all fatal crashes in 2001.[2]
- Young adults age 18 to 24 years are also less likely than older adults to consistently use restraints when driving or riding in a car.
- Prevalence of seat belt use is lower among rural Nebraskans, persons with less education, and those with lower annual household incomes.[10]
- Native Americans were more likely to report "never" using a seat belt (17%) compared to whites (10.8%), African Americans (8.3%), Hispanic Americans (10.9%), and Asian Americans (2%).[12]

Alcohol-impaired driving

In 2001, 89 or 38% of motor vehicle crash fatalities were alcohol-related.[2]

> Generally, patients involved in alcohol-related crashes had larger hospital charges than those involved in crashes where alcohol was not a factor. The median hospital charges for inpatient services for crashes involving alcohol was about $2000 more than crashes not involving alcohol.[13]

As crash severity increased, so did alcohol involvement. Since alcohol testing is only required in fatal crashes, the alcohol involvement indicated for injury and property damage only crashes is understated.

- Drivers age 21 – 34 are overrepresented in alcohol-related crashes.
- Drivers age 21 – 24 are most overrepresented, being involved in 21.2% of alcohol-related crashes but only 11.1% of all crashes.
- Drivers between the ages of 15 and 20 are in 20.1% of alcohol-related crashes, despite the fact that the legal drinking age in Nebraska is 21.[2]

> Annually in Nebraska, more than 13,000 Nebraskans are arrested for Driving Under the Influence (DUI). Sixty-five percent of all alcohol-related crashes involve drivers with a BAC of .15 or higher.[14]

According to the study, "Underage Drivers (14-20) Drinking and Driving", of those crashes involving underage alcohol impaired drivers, 72% were single vehicle crashes. Forty percent of these were speeding related.[15]

Location of crash

CODES data indicate that vehicle crashes in rural areas of the state were more likely to be fatal than crashes in urban areas. Reasons for this may include: higher speeds, a longer response time by trauma systems, roadway conditions, roadway surfaces, longer travel distances and a lower rate of safety belt use.

Among persons traveling in rural areas, there were 29 deaths and 1,082 persons injured per 100,000 population due to motor vehicle crashes, compared to 13 deaths and 785 persons injured per 100,000 for persons in crashes in urban areas of the state. Police reports indicated that safety belt usage was lower among persons involved in crashes in rural settings (71 percent vs. 85 percent in urban areas), which may have contributed to the increased rates of death and injury.[10]

Bicycles

In Nebraska, there were 302 motor vehicle/bicycle-related crashes in 2001; 5 persons were killed.[2] Of these injuries and fatalities only 6% were known to be wearing bicycle helmets.[10] According to the Behavior Risk Factor Surveillance System (BRFSS), 19% of children age 5 to 15 years "always" wore a helmet when riding a bicycle during the past year.[16]

The most serious injuries bicyclists suffer while biking are brain injuries. Helmet use can reduce the risk of brain injury by 85%. *(refer to Traumatic Brain Injury chapter)*

Possible Solutions

Incorporate effective strategies to:

- Increase occupant restraint use – both safety belts and child restraints.
- Increase bicycle helmet use.
- Prevent repeat Driving Under the Influence (DUI) offenders from driving.
- Decrease availability of alcohol to those under the legal drinking age.

Incorporate effective strategies and techniques to avoid risky behaviors, such as riding with a driver who has been drinking, into health promotion programs for adolescents.

Recommendations

1. Create an environment that supports upgrading Nebraska's safety belt use law.

States with a primary (standard) enforcement safety belt law have a safety belt usage rate that is estimated at 15% higher.[1] Safety belts cut the risk of death or serious injury in a crash by 45 to 50%.[8] Monetary savings could amount to an estimated $4,300 per new belt user.[11]

2. **Create an environment that supports adopting bicycle helmet use requirements.**

   Bicycle helmets reduce the risk of serious head injury by as much as 85% and the risk of brain injury by as much as 88%.[17]

3 **Provide support for local ordinances for safety belts and bicycle helmets.**

   The National Highway Traffic Safety Administration reports that local ordinances, when coupled with appropriate levels of public awareness and law enforcement, can be very effective in increasing safety belt use and reducing the severity of injury. This will lessen the demands on emergency services in the city and allow for a more efficient utilization of personnel and equipment, and most importantly decrease the personal tragedy and public cost of motor vehicle crashes.

4. **Upgrade Nebraska's Graduated Licensing provisions.**

   Crashes are the leading cause of death among American teens, accounting for more than one third of all deaths of 16 to 18 year-olds. An effective way to reduce this toll is graduated licensing. Graduated systems that are well designed restrict night driving, limit teen passengers, establish zero tolerance for alcohol, and require a specified amount of supervised practice during the initial phase.[18]

5. **Encourage and support enforcement of excess alcohol service violations.**

   Enforcing the state law against serving alcohol to intoxicated bar and restaurant patrons would reduce alcohol-related crash fatalities by an estimated 11%. It would cost an estimated $.30 per licensed driver and save about $20 per licensed driver.[6]

6. **Encourage the frequency and use of sobriety checkpoints.**

   Intensive enforcement of Nebraska state BAC limits with highly visible sobriety checkpoints would reduce alcohol-related fatalities by at least 15% and save approximately $57,900 per checkpoint.[6]

7. **Create an environment that supports a motorcycle helmet law.**

   The motorcycle helmet use law in Nebraska saves lives and prevents devastating and debilitating head injuries. Motorcyle helmets are estimated to be 29 percent effective in preventing fatal injuries and 67 percent effective in preventing brain injuries.[19]

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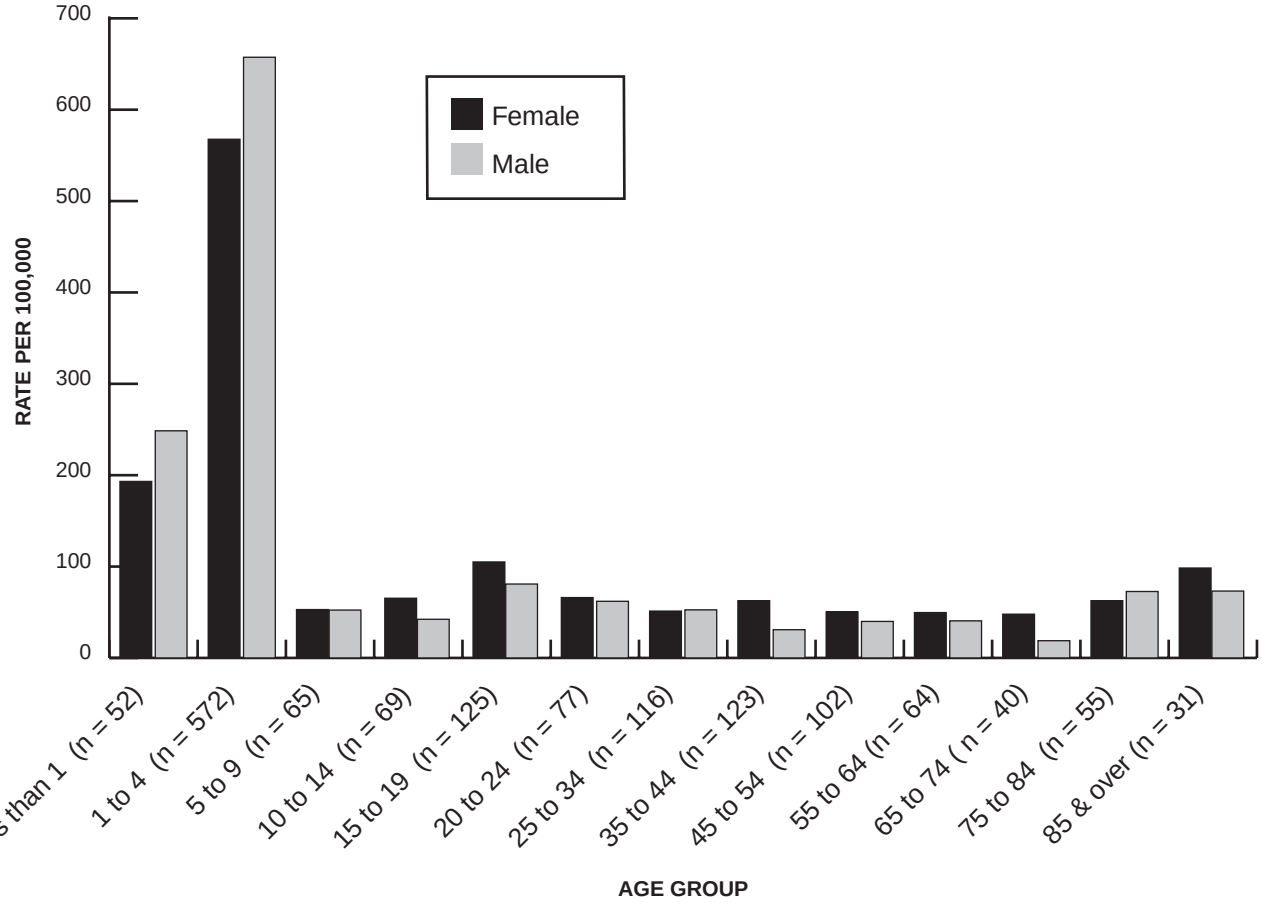
POISONING INJURIES

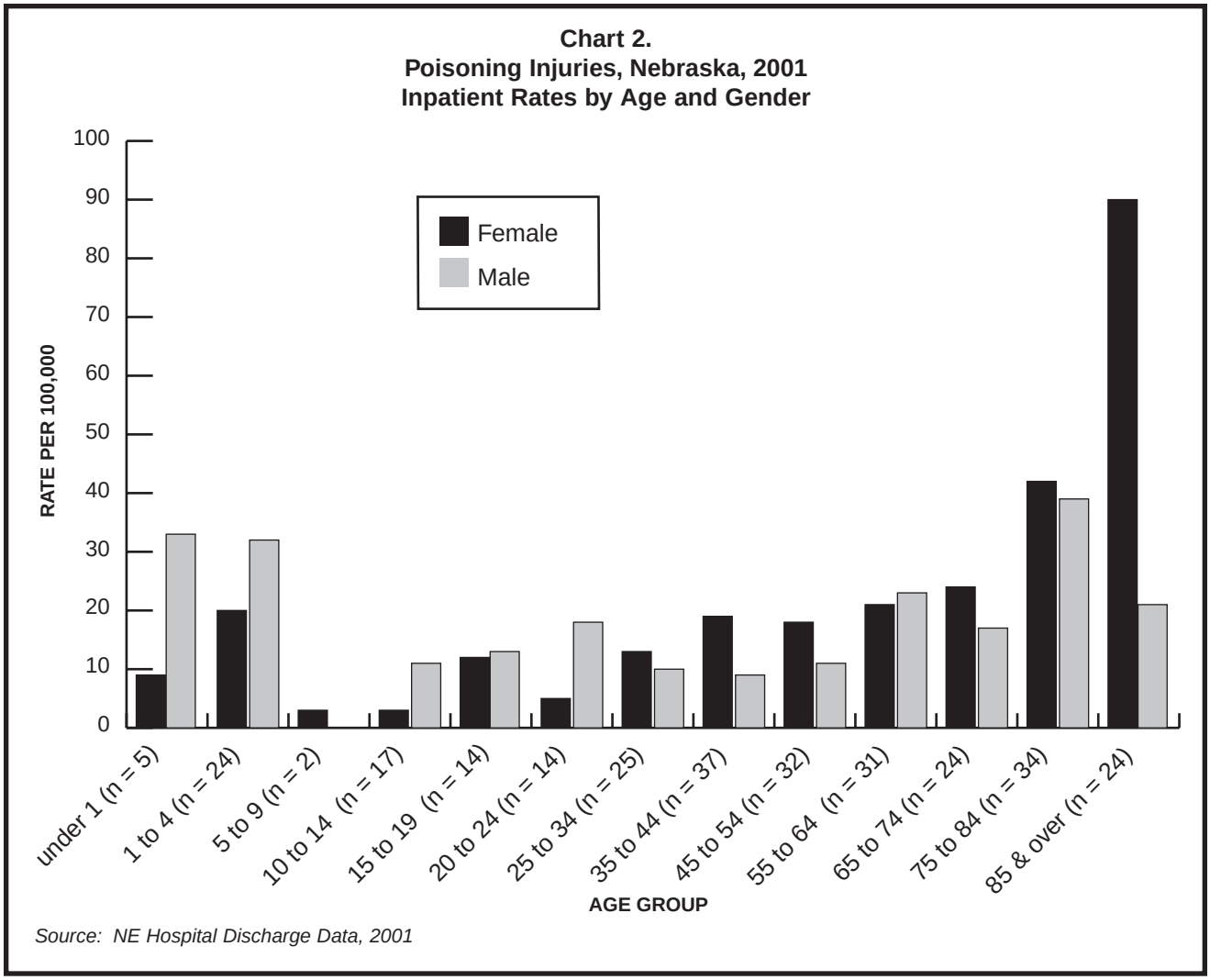
Statement of the Problem

Poisoning is the third leading cause of inpatient hospital discharge in Nebraska. The Nebraska rate of 130.4 per 100,000 population ranks lower than the national rate.[1] Children age 4 and under had the highest hospital discharge rate for poisoning injuries. (Chart 1) Older adults, age 75 or older, had higher rates of inpatient hospital discharges. (Chart 2)

Chart 1.
Poisoning Injuries, Nebraska, 2001
Discharge Rates by Age and Gender

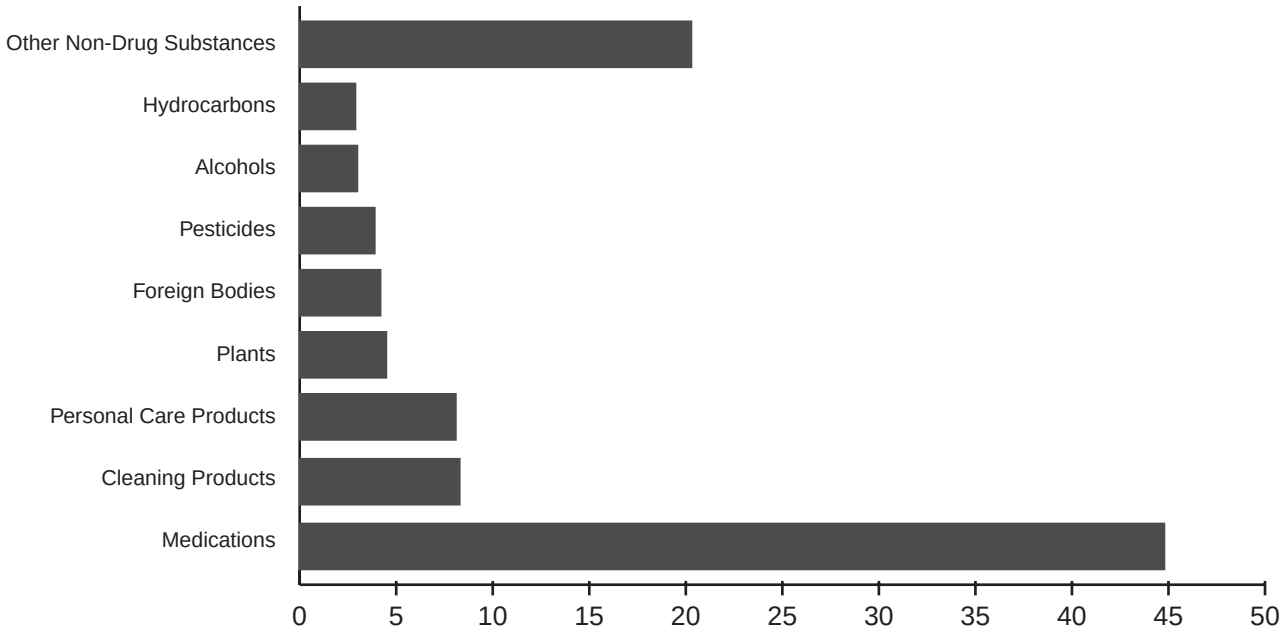


Source: NE Hospital Discharge Data, 2001



Medications are the most common substance resulting in a poisoning exposure. (Chart 3) The most common medication exposures included analgesics (acetaminophen, ibuprofen and aspirin), cold and cough preparations, topicals, sedatives and antidepressants.[2]

Chart 3.
2001 Human Exposures by Substance



Source: Nebraska Regional Poison Center, 2001

Significance of the Problem

The total yearly cost of poisoning-related injuries and deaths exceeds $7.6 billion among children age 14 and under in the United States. Children under age five account for approximately two-thirds of these costs. On average, medical expenses associated with a poisoning exposure are about $925 per case.[1]

The cost of preventing poisonings is considerably lower than the cost of treating them, with every dollar spent on poison centers resulting in savings of $7.00 in medical costs. Immediately calling a poison center if it is suspected that a person has ingested a potentially harmful substance can reduce the likelihood of severe poisoning and possibly prevent the need for a hospital emergency room visit, as well as decrease the cost of the incident. The Nebraska Regional Poison Center in Omaha, Nebraska, estimates that in 2001, they reduced the cost of poisonings by 71%, resulting in savings of approximately 4.5 million dollars.[2]

Trends

Children are at considerably greater risk for poison exposure than adults because of their natural curiosity and the desire to put everything in their mouths. When exposed to poison, children are more likely to suffer serious consequences because they are smaller, have faster metabolic rates and their bodies are less capable of handling toxic chemicals. The youngest children are naturally at greatest risk.[3]

Dramatic drops have been seen in pediatric morbidity and mortality from poisoning over a twenty-year period corresponding to the poison prevention movement. In 1961, the year Congress passed the law authorizing Poison Prevention Week, nationally an average of 450 children under age five died because of unintentional poisoning. By 1998, the number had dropped to 25 deaths in children less than six years of age.[2]

Data from the Nebraska Regional Poison Center in Omaha showed that in 2001:

- 55% of poisoning exposures involved children less than six years of age,
- 86% of poisoning exposures were unintentional,
- 11% were intentional,
- 2% were the result of adverse reactions to drugs or food, and
- 1% were due to substance contamination or tampering.

Hospital discharge data show that older adults are more likely to be admitted to a hospital for poisoning. Several possible reasons for this include:

- Older adults tend to take more toxic prescription medications; an overdose will cause them to develop more toxicity than the medications that a younger person takes.
- Older adults are often taking multiple medications that may result in confusion and an increase in therapeutic errors.
- Toxins tend to most affect the very young and the very old. Therefore, an older adult with pre-existing medical conditions would be more likely to be admitted to the hospital for observation than a younger person with the same poisoning who had no medical conditions.[2]
- Older adults may be less likely to contact a poison center.

Self-inflicted poisonings were much more likely to result in inpatient hospitalization.[1] (*Refer to Suicide chapter.*)

Contributing Factors

Seasonal Hazards: In the winter, individuals are more apt to be exposed to carbon monoxide, lamp oil, cough and cold medications. In the fall, there are hazards such as berries, antifreeze, and peppers. In the spring and summer, dangerous substances may include insect repellents, pesticides, hydrocarbons and cleaning products.

Improper storage: Storing chemicals or medicines in containers other than their original container increases the risk of being exposed to poisons. Putting medication in something other than the original container poses a great risk because there is an unknown amount and unknown medication. Storing chemicals in the garage in pop bottles, milk jugs, or other containers is another dangerous practice.

Lack of awareness and/or education: Each year there are many new parents and children to teach or remind about the dangers of poisons.

Possible Solutions

Increase awareness of poison hazards by conducting statewide public education.

Child resistant packaging.

Conduct train the trainer programs for pharmacy students.

Include information on poisoning in all babysitting classes such as those provided by the Red Cross.

Mass mailings to school nurses, day care centers, elementary schools, doctor's offices, and pharmacies including information on the Nebraska Regional Poison Center number.

Utilize carbon monoxide detectors in residences.

Recommendations

1. **Support the Nebraska Regional Poison Center's efforts to distribute educational programs and materials throughout Nebraska.**

   For every dollar invested in poison prevention, $7 in medical costs is saved.

2. **Conduct a public service campaign to inform the public about the Nebraska Regional Poison Center number and to raise awareness of the services that the Nebraska Regional Poison Center provides.**

   The Nebraska Regional Poison Center estimates that 71% of poisonings are safely handled at home. Their services also provide for increased efficiency in medical management of poisonings and improved patient outcomes.

3. **Provide all new parents information on poisons and about the Nebraska Regional Poison Center.**

   According to the Nebraska Regional Poison Center, 55% of poison exposures occur in children less than 6 years of age.

4. **Conduct "Train the Trainer" courses for child- care health consultants and Educational Service Unit Coordinators.**

   Child Care Health Consultants provide staff training and have direct access to child care providers and families with young children.

5 **Encourage medication management through brown bag reviews at senior centers, assisted living facilities, and independent living facilities.**

   During a brown bag review, individuals bring all of their current medications for review by a pharmacist. This is helpful in identifying side effects or possible interactions of the medications that may be hazardous.

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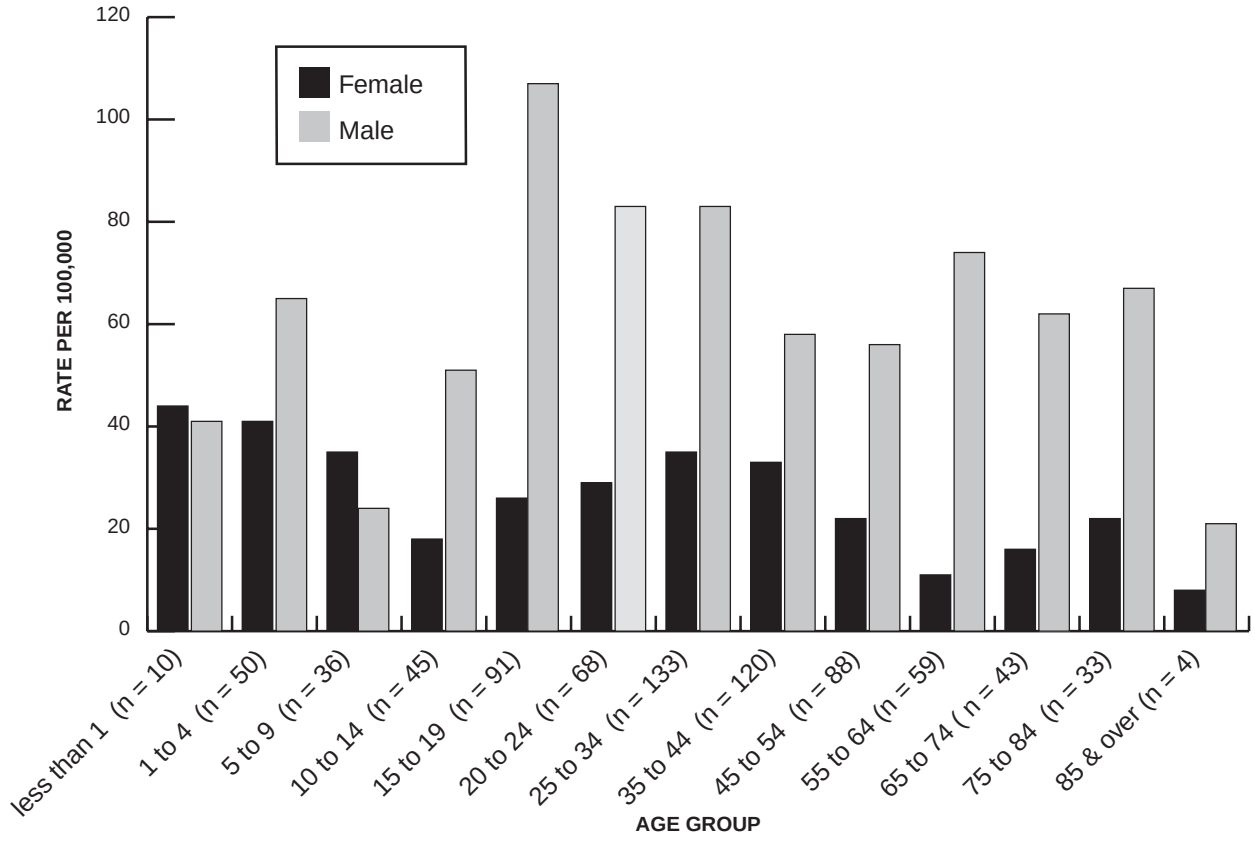
Fire and Burn Injuries

Statement of the Problem

In Nebraska, males tended to be injured more often by fire and flames than females. Males age 15 – 19 had the highest rate of injury due to fire and flames. (Chart 1)

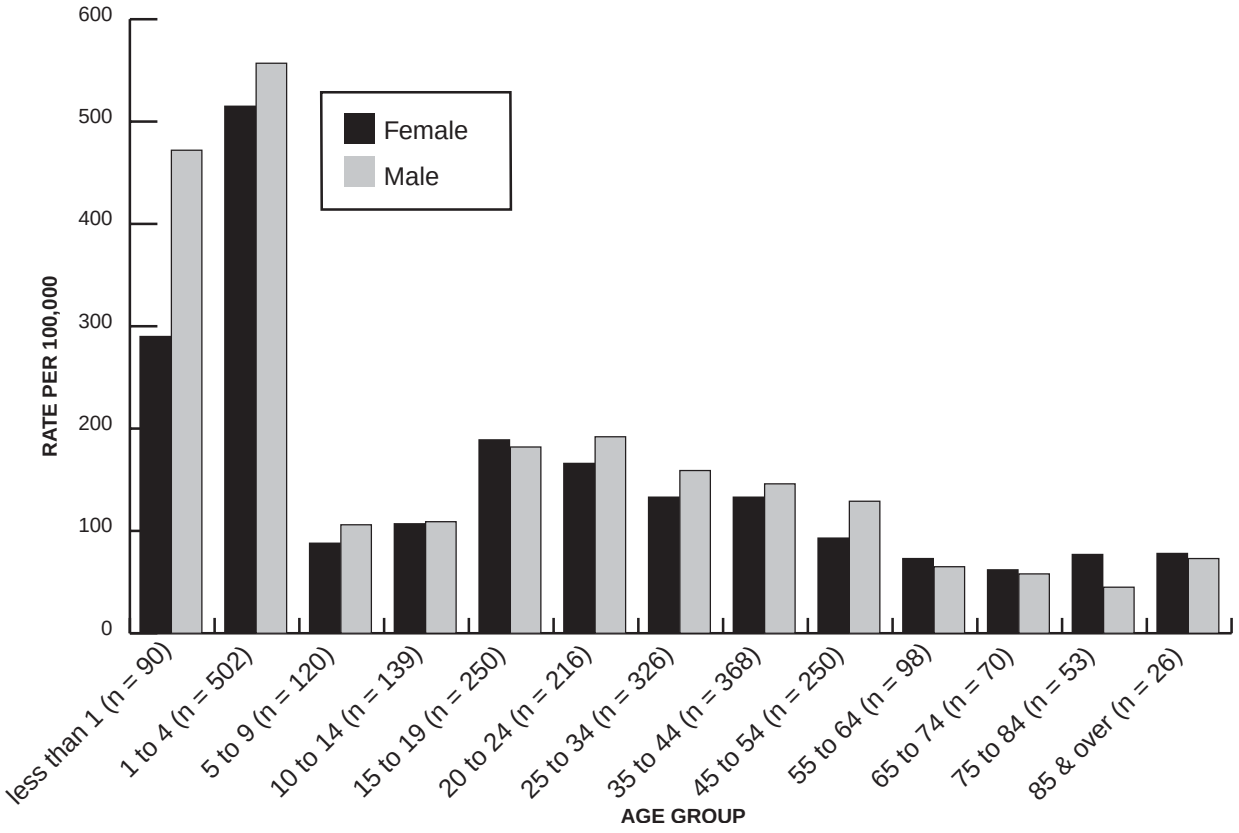
Chart 1.
Fire / Flame Injuries – Nebraska, 2001
Discharge Rates by Age and Gender



Source: NE Hospital Dischrage Data, 2001

Children age 4 and younger had the highest rates of injury due to hot objects. (Chart 2)

Chart 2.
Hot Object Injuries – Nebraska, 2001
Discharge Rates by Age and Gender



Source: NE Hospital Dischrage Data, 2001

In Nebraska, 25 people died from fire injuries in 2001. Of these 25 fire deaths, only 3 occurred in structures with working smoke alarms.[1]

Significance of the Problem

Although burn injuries may not rank as a leading cause of unintentional injury, it has to be recognized that burn injuries often require extended hospital stays thus increasing overall costs to society. Some of these costs may be difficult to measure but include decreased productivity as well as pain and suffering both for the injured person and family members. In addition to the length of stay component, increased cost of new technology in burn care and the specialized care by specially trained personnel keep costs of burn care high. Average length of stay in the hospital for burn by a hot object is 5.5 days. For a burn caused by fire and/or flames, average length of stay is 11.8 days.[2]

According to the National Fire Prevention Agency, between 1992 and 1996, nearly 100,000 fires a year were started by children.[3] Nationally, 85% of people who die in child-set fires are children.[4] There are no Nebraska statistics for child-set fires, but the Fire Marshal's Office, the St. Elizabeth's Hospital Burn Center, and social service agencies have all indicated that this is a problem in Nebraska as well.

Trends

Children age four and under and adults 65 and older are at increased risk of fire-related injuries and deaths.[5]

Children under age four are also more likely to sustain injuries from hot objects such as hot liquids.

Young children are at grave risk of injury and death from residential fires because they have less control of their environment than adults and limited ability to react appropriately.[6]

Fires set by children are most likely to be set by boys. More than half of the children who start fires are between the ages of four and nine. Matches and lighters are the primary ignition sources of child-started residential fires; nationally they are responsible for 80% of child-started fires.[3]

Contributing Factors

Lack of a working smoke alarm:

- Homes with smoke alarms typically have a death rate that is 40-50% less than the rate for homes without alarms.
- In three of every 10 reported fires in homes equipped with smoke alarms, the devices did not work.
- Most often smoke alarms fail because of missing, dead or disconnected batteries.[7]

$1 spent on smoke alarms can save $69 in fire-related costs.[8]

Children are more likely to be burned by hot objects because of their natural curiosity in exploring things around them.

Lack of supervision of children by parents and caregivers contributes to fire and burn injuries.

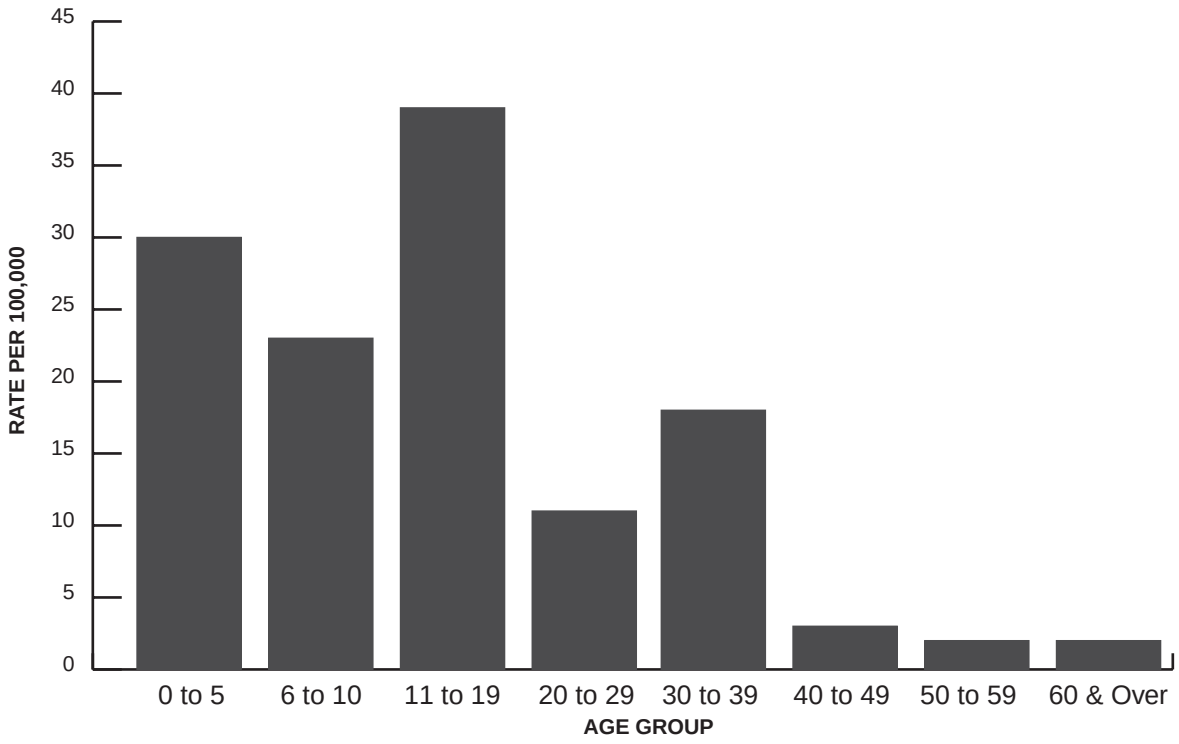
Improper use and lack of or improper supervision contributes to fireworks injuries.

The Behavioral Risk Factor Survey
indicated that in 1999 in Nebraska,

7%	of respondents stated that they did not have any smoke alarms in their homes
7%	reported that they had never checked their smoke alarms to be sure that they were working properly, and
18%	indicated that it had been more than 6 months since they last tested the smoke alarms in their homes.
32%	of all respondents and members of their households were at risk due to potentially nonfunctional smoke alarms.[9]

Children and young adults age 19 and under sustain 71% of fireworks injuries. (Chart 3) Males are almost three times as likely to be injured as females.

Chart 3.
Fireworks Injuries, Nebraska, 2002
by Age Groups



Source: State Fire Marshal, 2002

Young adults tend to suffer more work-related burn injuries because they work in fast-food related jobs. They also tend to engage in more risk taking behaviors.

Older adults are also at higher risk of death from fires, because they are generally more vulnerable to smoke inhalation and burns and less likely to recover. Sense impairment (such as hearing loss or loss of vision) or mental impairment may also keep older adults from noticing fire, while impaired mobility may prevent them from escaping it.[10]

Alcohol use may be a contributing factor in that it affects behavior and risk taking. The Centers for Disease Prevention and Control estimate that alcohol contributes to about 40% of residential fire deaths.[8] Actual statistics are not available; hospitals may not test for blood alcohol levels because insurance may then deny payment.

Possible Solutions

Identification of residences that are not protected by smoke alarms.

Installing smoke alarms in residences and making certain that they are working properly.

Ensure that fireworks are purchased and used only under adult supervision.

Increase the number of school and community presentations using tools such as a fire simulator or a program such as Risk Watch.

Implement Juvenile Firesetter programs in communities.

Recommendations

1. **Encourage local communities to implement smoke alarm distribution programs.**

   Homes with smoke alarms typically have a death rate that is 40-50% less than the rate for homes without alarms.[7]

2. **Support legislation to limit access to fireworks by children.**

   About 50% of persons injured by fireworks are children age 14 years and younger. Boys age 5 – 14 years have the highest number of fireworks-related injuries. One study estimates that children are 11 times more likely to be injured by fireworks if they are unsupervised.[11]

3. **Build a rapport with the media to facilitate prevention messages that are targeted as appropriate for seasonal activities.**

   Seasonally appropriate prevention messages assist with continually creating awareness of fire hazards. The public needs to hear these messages frequently.

4. **Continue and increase the numbers of prevention messages from a variety of sources.**

   Prevention messages should come from sources such as local coalitions, schools, the Fire Marshal's office, neighborhood organizations, senior centers, and child care centers.

5. **Encourage communities to implement and participate in firesetter prevention and intervention programs.**

   The Juvenile Firesetter Intervention Program, available through the Nebraska Fire Marshal's Office, strives to intervene with children who play with or deliberately set fires as well as effectively teach prevention to the community.

6. **Encourage communities to implement prevention programs such as Risk Watch.**

   Risk Watch, which has been evaluated to show that it is effective in teaching important safety knowledge, is a comprehensive injury prevention curriculum for children in preschool through grade 8. The program links teachers with community safety experts and parents to teach skills and knowledge in eight areas of injury prevention including fire and burn prevention.[15]

7. **Improve surveillance across the state so as to increase opportunities for grants.**

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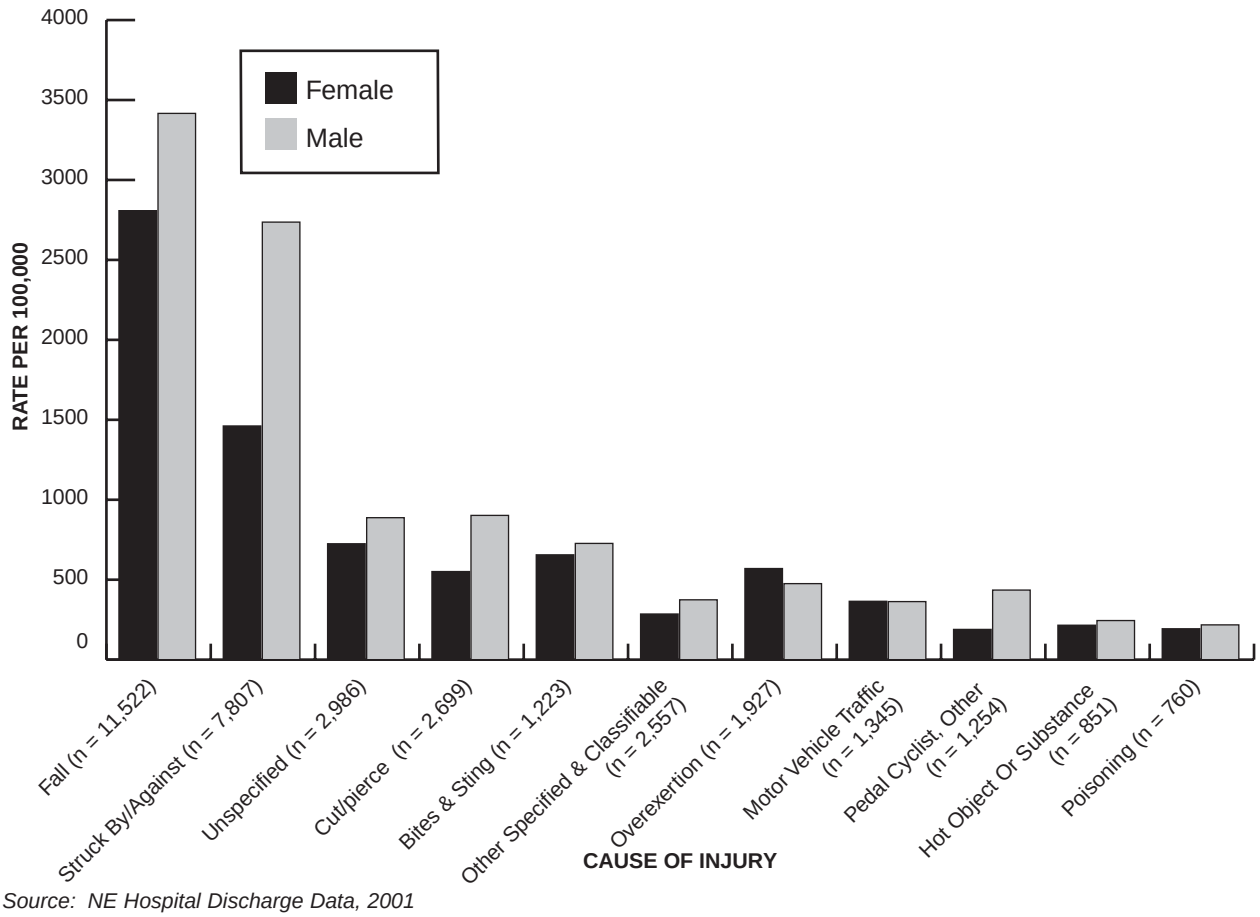
CHILDHOOD INJURIES

(CHILDREN AGE 14 AND UNDER)

Statement of the Problem

In 2001, 36,286 children age 14 and under went to Nebraska acute care hospitals to receive treatment for an unintentional injury.[1] The most common causes of injury were falls and struck by/against object. (Chart 1)

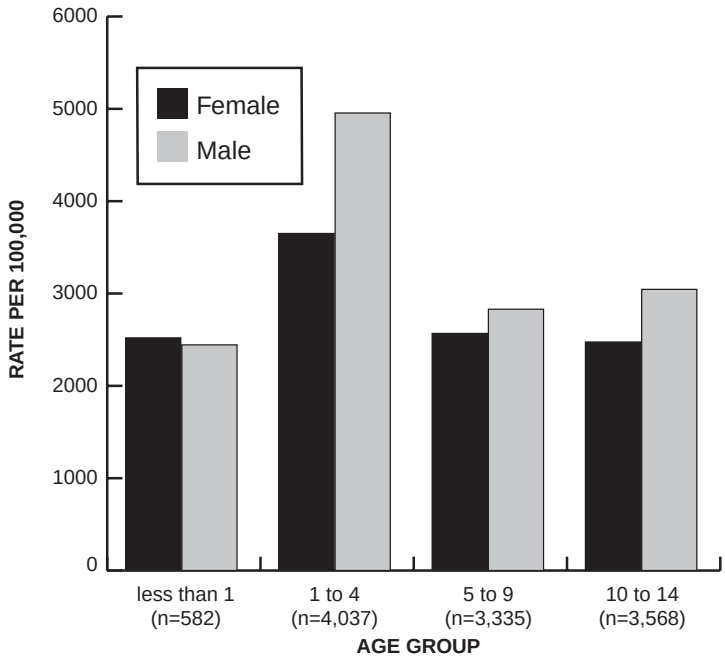
Chart 1.
Leading Causes of Injury, Nebraska, 2001
Children Age 0-14 – Discharge Rates by Gender



Source: NE Hospital Discharge Data, 2001

Children under age 4 had the highest fall injury rates for both males and females. (Chart 2) Falls may be from stairs, ladders, a building, playground equipment, chairs, etc. or may be tripping, pushing, or tackles.

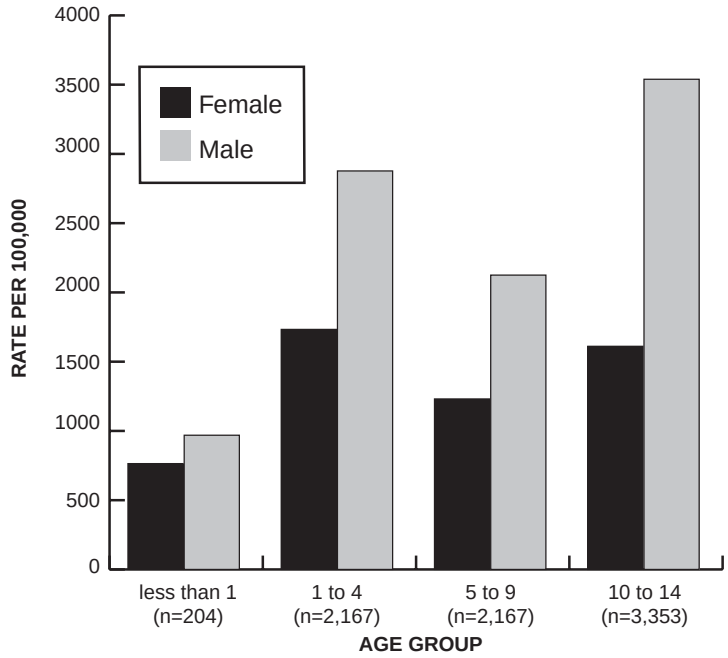
Chart 2.
Falls Injuries, Nebraska, 2001
Children Age 0-14 – Discharge Rates by Gender



Source: NE Hospital Dischrage Data, 2001

Males had higher injury rates than females in all age groups for struck by object, which includes sports-related injuries (being kicked or stepped on during a game, being struck by a hit or thrown ball).[1] (Chart 3)

Chart 3.
Struck by Object Injuries, Nebraska, 2001
Children Age 0-14 – Discharge Rates by Gender



Source: NE Hospital Dischrage Data, 2001

In Nebraska close to half of child deaths are attributed to unintentional injury.[2]

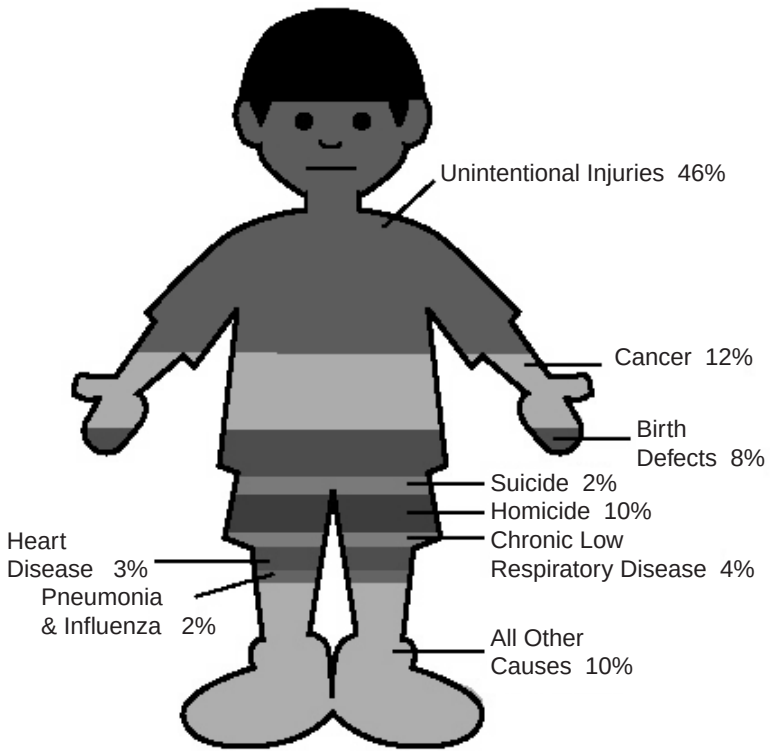
> "If a disease was killing our children at the rate unintentional injuries are, the public would be outraged and demand this killer be stopped."
>
> *Former Surgeon General,*
> *C. Everett Koop, M.D., Sc.D.*

Significance of the Problem

Unintentional injuries are the leading cause of hospitalization and death for children ages 1 to 14. (Figure 1)

Injury is the leading cause of medical spending for children ages 5 to 14. For every child injured, total costs are more than $12,700, including $650 in medical costs, more than $1,000 in future earnings lost and nearly $11,000 in lost quality of life.[3]

Figure 1.
Leading Causes of Death,
Nebraska Children Age 1 to 14



Source: CDC/NCHS/NVSS, 2000

For every childhood death caused by injury, there are

- approximately 34 hospitalizations
- 1,000 emergency department visits
- many more visits to private physicians and school nurses
- an even larger number of injuries treated at home.[4]

Motor vehicle crashes are the leading cause of death among children at every age after their first birthday. Nebraska law states that all children up to age six must be properly restrained. In 2002, 30% of Nebraska children age 6 and under were riding completely unrestrained in a motor vehicle.[7] Unrestrained children are four times more likely to receive severe injuries, have longer hospital stays and higher hospital charges.[8]

Trends

Younger children, males, minority children, and poor children suffer unintentional injuries disproportionately.

An estimated 42 percent of all childhood injury deaths and 40 percent of all childhood injury-related emergency room visits occur from May to August.

Among children age 14 and under, it is estimated that 40 percent of deaths and 50 percent of nonfatal unintentional injuries occur in and around the home.[3]

Contributing factors

Leading causes of unintentional injury-related death vary according to a child's age and are dependent upon developmental abilities and exposure to potential hazards, in addition to parental perceptions of a child's abilities and injury risk. Injuries tend to occur when the demands of a task exceed the child's ability to safely complete it.[8]

Lack of supervision contributes to unintentional injuries. The vast majority of unintentional injury-related deaths among children occur in the evening hours, when children are most likely to be out of school and unsupervised.

Children living in rural areas are at significantly greater risk from unintentional injury-related death than children living in urban areas. These children are especially at risk from drowning, motor vehicle crashes, unintentional firearm injury, residential fires and agricultural work-related injury. These injuries may occur in remote, sparsely populated areas that tend to lack organized systems of trauma care, resulting in prolonged response and transport times. A short supply of medical facilities, equipment and personnel to treat injuries in rural areas may also contribute to increased risk.[3]

Nearly two-thirds of children age 15 and younger who died in alcohol-related motor vehicle crashes were riding with the drinking driver.[5]

Many communities and households have outdated playground equipment that contributes to the risk of injuries. More than one-third of all playground-related injuries are severe—fractures, internal injuries, concussions, dislocations, and amputations. Almost 70% of injuries related to playground equipment occur on public playgrounds.[5]

> Nebraska received a C grade for safe playgrounds from the National Program for Playground Safety.[9]

The National Program for Playground Safety completed a two-year study of the safety of the nation's playgrounds. Playgrounds in the United States overall received a grade of C. The study concluded that America's children are at potential risk while at play, particularly in regard to two of the lowest scoring (F's) elements of the study—supervision and age-appropriate design.[9]

(Refer to chapters on Traffic-Related Injuries, Poisoning, Fire and Burns, Falls, and Traumatic Brain Injury for more information related to those injuries.)

Possible Solutions

Study the causes of childhood falls and educate parents and care givers about fall hazards, particularly in and around the home.

Environmental solutions: update playground equipment and provide separate play areas for 2-5 and 5-12 year olds. Provide training for schools, child care centers and communities on playground safety.

Increase awareness among parents, coaches and care givers about the need for proper protective gear during recreational and sports activities. *(Refer to Traumatic Brain Injury chapter.)*

Increase the use of school bus transportation to school for children instead of motor vehicles. School buses have been and remain the safest form of highway transportation.[10]

(Refer to chapters on Falls, Fire and Burns, Poisoning, Traumatic Brain Injury and Traffic-Related Injuries for more solutions related to those specific injury causes.)

Recommendations

1. **Develop a fall prevention program within NHHSS Injury Prevention Program.**

   Falls are the leading cause of hospitalization for children as well as adults. A multi-faceted falls prevention program within NHHSS could promote prevention efforts statewide.

2. **Create an environment that supports upgrading Nebraska's safety belt law.**

   States with a primary enforcement safety belt law have a safety belt usage rate that is estimated at 15% higher.[16] Nearly 40% of children riding with unrestrained drivers were completely unrestrained compared to only 5% of children riding with belted drivers.[3]

3. **Promote increased use of proper child safety seats, booster seats and safety belts.**

   Safety belts cut the risk of death or serious injury in a crash by 45 to 50%. Child restraints are highly effective; when used correctly they reduce the risk of death by 71% for infants and by 54% for children ages 1 to 4.[11]

4. **Continue to support the NHTSA-Standardized Child Passenger Safety training.**

   Individuals who complete this training are certified as child passenger safety technicians who can assist families in making sure their child safety seats are used properly. The rate of misuse of child safety seats for those checked at check up events or fitting stations in Nebraska in 2002 was 92%.[12]

5. **Encourage all pediatricians and family practice physicians to provide education to parents and caregivers in the area of injury prevention.**

   Counseling parents and children about the prevention of common childhood injuries is an important contribution toward preventing the major cause of childhood morbidity and mortality.[13]

6. **Provide training on injury prevention to child care health consultants through Healthy Child Care Nebraska.**

   Child Care Health Consultants work with training of child care providers in health and safety issues in homes and child care centers. They have the opportunity to reach providers and parents across the state to decrease injuries.

7. **Encourage education on farm safety for youth in rural areas.**

   Children may be exposed to hazards associated with agricultural work and rural environments.[14]

8. **Encourage school and community programs to promote bicycle safety and helmet use.**

   Bicycle helmets reduce the risk of serious head injury by as much as 85%.[5]

9. **Encourage schools and communities to implement an injury prevention program such as the Risk Watch program.**

   Risk Watch, which has been evaluated to show that it is effective in teaching important safety knowledge, is a comprehensive injury prevention curriculum for children in preschool through grade 8. The program links teachers with community safety experts and parents to teach skills and knowledge in eight areas of injury prevention.[15]

(Refer to chapters on Falls, Fire and Burns, Poisoning, Traumatic Brain Injuries and Traffic-Related Injuries for more recommendations related to those specific injury causes.)

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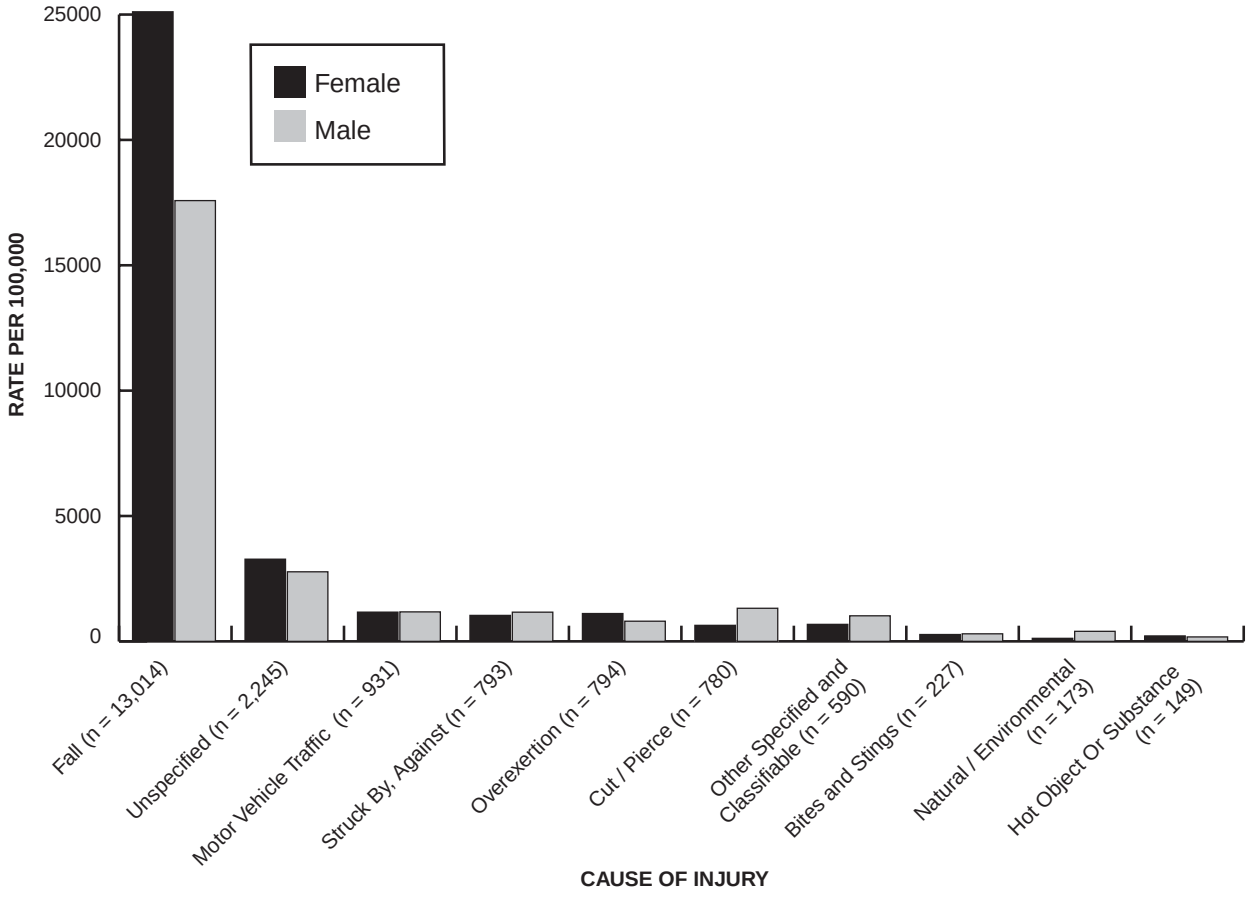
Older Adult Injuries

(Adults 65 and older)

Statement of the Problem

Falls are the leading cause of injury resulting in hospitalization or outpatient visits for older adults. (Chart 1)

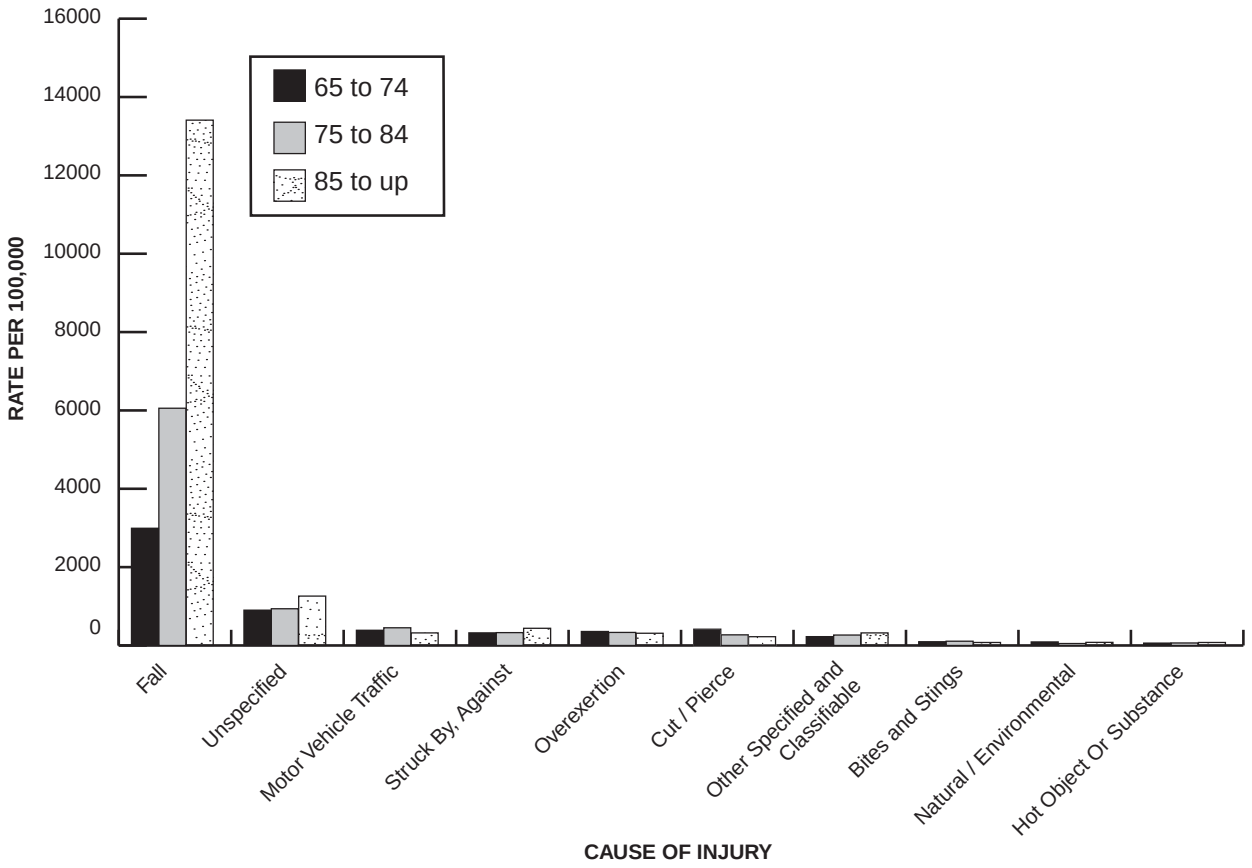
Chart 1.
Leading Causes of Injury, Nebraska, 2001
Older Adults (65 and older) – Discharge Rates by Gender



Source: NE Hospital Discharge Data, 2001

The rate of fall injuries increased substantially with increasing age. (Chart 2)

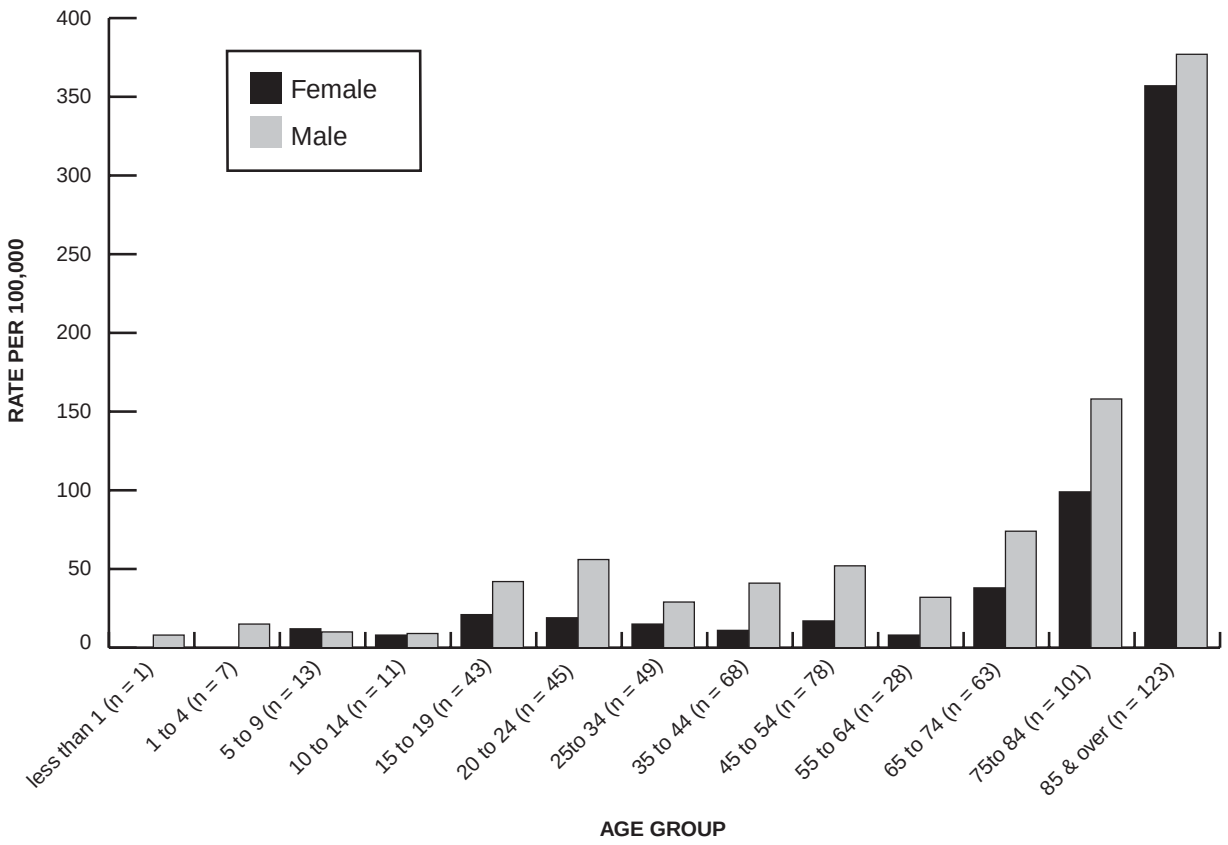
Chart 2.
Leading Causes of Injury, Nebraska, 2001
Older Adults – Discharge Rates by Age Group



Source: NE Hospital Discharge Data, 2001

Older Nebraskans had a higher death rate from unintentional injuries than younger residents did. Death rates increased substantially with increasing age. (Chart 3)

Chart 3.
Unintentional Deaths, Nebraska, 2001
Rates by Age Group



Source: NHHSS Vital Statistics, 2002

Significance of the Problem

The leading cause of unintentional injury deaths among older adults is motor vehicle crashes. Compared to younger people, persons age 70 and over drive fewer miles per licensed driver. However, older adults are generally more susceptible to complications from crash injuries and are thus more likely to die from their injuries. The death rate for drivers in this age group is approximately nine times higher than the rate for drivers age 15 to 69.[1]

Falls are the second leading cause of injury deaths among people age 65 years and older. Falls are also the most common cause of injuries and hospital admissions due to trauma for older adults. Most fractures experienced by people in this age group are the result of falls.[1]

For older adults, the most serious fall-related injury is hip fracture.

- At least three-fourths of hip fractures occurred among women.

National statistics show that nearly one-fourth of all hip fracture patients age 50 and older die in the 12 months following the fracture.

- Hip fractures are also a frequent cause of disability. Approximately half of all older adults who were hospitalized for hip fracture were unable to return home or live independently after the fracture.[1]

In Nebraska in 2000, 87% of hospital costs for a hip fracture were paid by Medicare. The average total hospital charge for hip fractures was $16,804.[2]

(Refer to Falls chapter)

Trends

The older adult population in Nebraska is increasing.

- Census data from 2000 showed that 13.6% of Nebraskans were 65 and older, as compared to 12.4% for United States as a whole.
- In 2001, the average age at death among Nebraskans was 75.1 years, the highest ever recorded in Nebraska history.
- By gender, the average age at death in 2001 was 78.6 years for Nebraska women and 71.2 years for Nebraska men.[3]

Contributing Factors

Several factors that may contribute to injuries and injury-related fatalities in older Nebraskans include:

- Lack of education/understanding of the effects of medications.
- Lack of health care; especially access to care in rural areas.
- Many older adults are on a fixed income. This may result in limited resources for proper medications, needed home repairs, purchase of adaptive devices, or other things that may help prevent injuries.

Risk factors for fall injuries among older adults:

- being white
- being female
- having physical limitations

- being mentally impaired
- having weak muscles or balance problems
- having more than one chronic disease
- taking a number of medications or using psychoactive medications
- wearing shoes with thick, soft soles
- wearing glasses or having vision problems.[4]

The normal process of aging can affect driving skills. Motor skills and mental processes begin to slow and vision and hearing can deteriorate. These factors can put older adults at greater risk for injury in motor vehicle crashes.

Older adults are also at higher risk of death from fires, because they are generally more vulnerable to smoke inhalation and burns and less likely to recover.[1] *(Refer to Fire and Burns chapter.)*

Possible Solutions

Environmental solutions. *(Refer to Falls chapter.)*

Conduct screening tests that can accurately identify seniors who are more likely to fall.[4]

Exercise programs for older adults to increase strength and improve balance and coordination.

Conduct home assessments to reduce falls among older adults.

Conduct safe driving programs for older adults.

Training of health care providers, including pharmacists, in working with older adults.

Public education about injury prevention and older adults.

Recommendations

1. **Encourage environmental assessments in homes, assisted living facilities, and independent living facilities to identify potential fall hazards.**

   For adults 65 years old or older, 60% of fatal falls happen at home. Making living areas safer may reduce the risk of falling.[5]

2. **Encourage community environmental assessments to identify potential injury hazards.**

   For adults 65 years old or older, 30% of falls occur in public places.[5] Environmental assessments and appropriate modifications of places where seniors are likely to gather may help reduce the risk.

3. **Promote exercise among older adults.**

   Physical activities that improve strength, balance, and coordination reduce the risk of falls and fall-related injuries.[4]

4. **Encourage medication management through brown bag reviews at senior centers, assisted living facilities, and independent living facilities.**

   During a brown bag review, individuals bring all of their current medications for review by a pharmacist. This is helpful in identifying side effects or possible interactions of the medications that may be hazardous or affect the individual's balance, etc.

5. **Conduct public awareness campaigns addressing the preventability of older adult injuries.**

   The public needs to be made aware of the fact that most injuries are preventable and are not inevitable. Injuries are not just the result of getting older.

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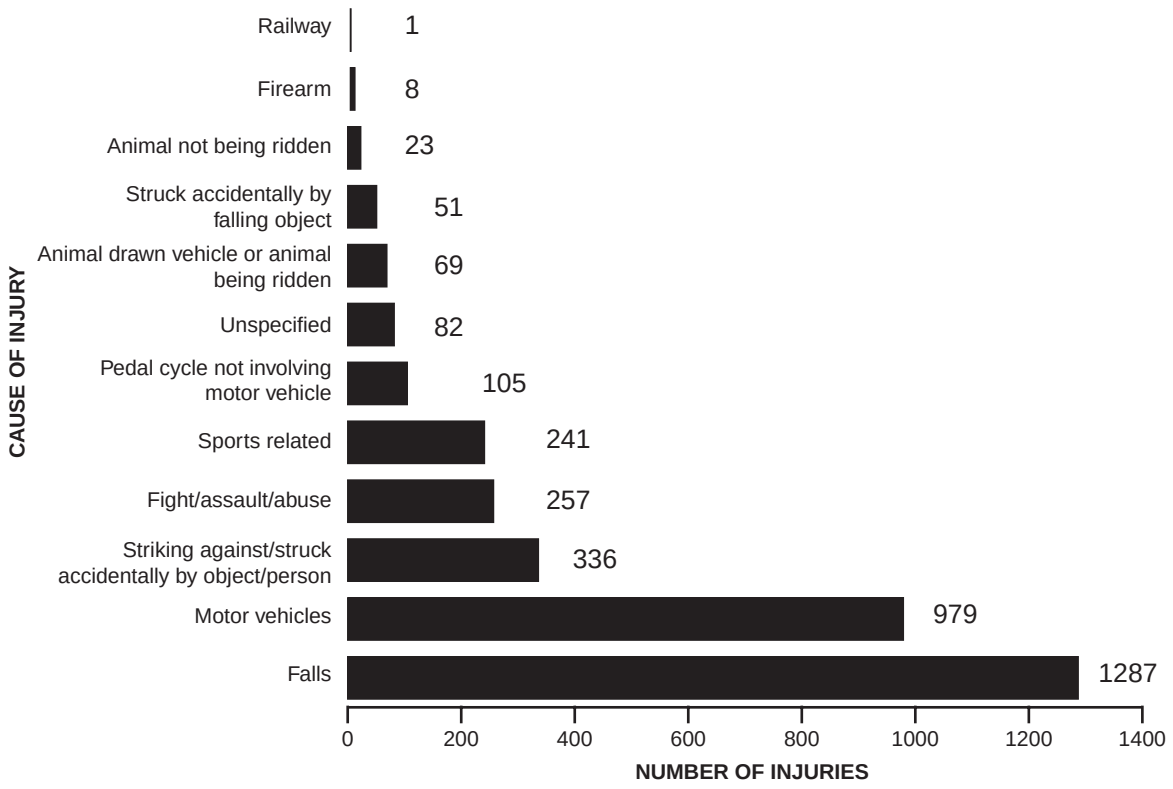
TRAUMATIC BRAIN INJURIES

Statement of the Problem

In Nebraska, falls, motor vehicle crashes, and struck by object were the leading causes of traumatic brain injury (TBI) for both inpatients and outpatients. (Chart 1)

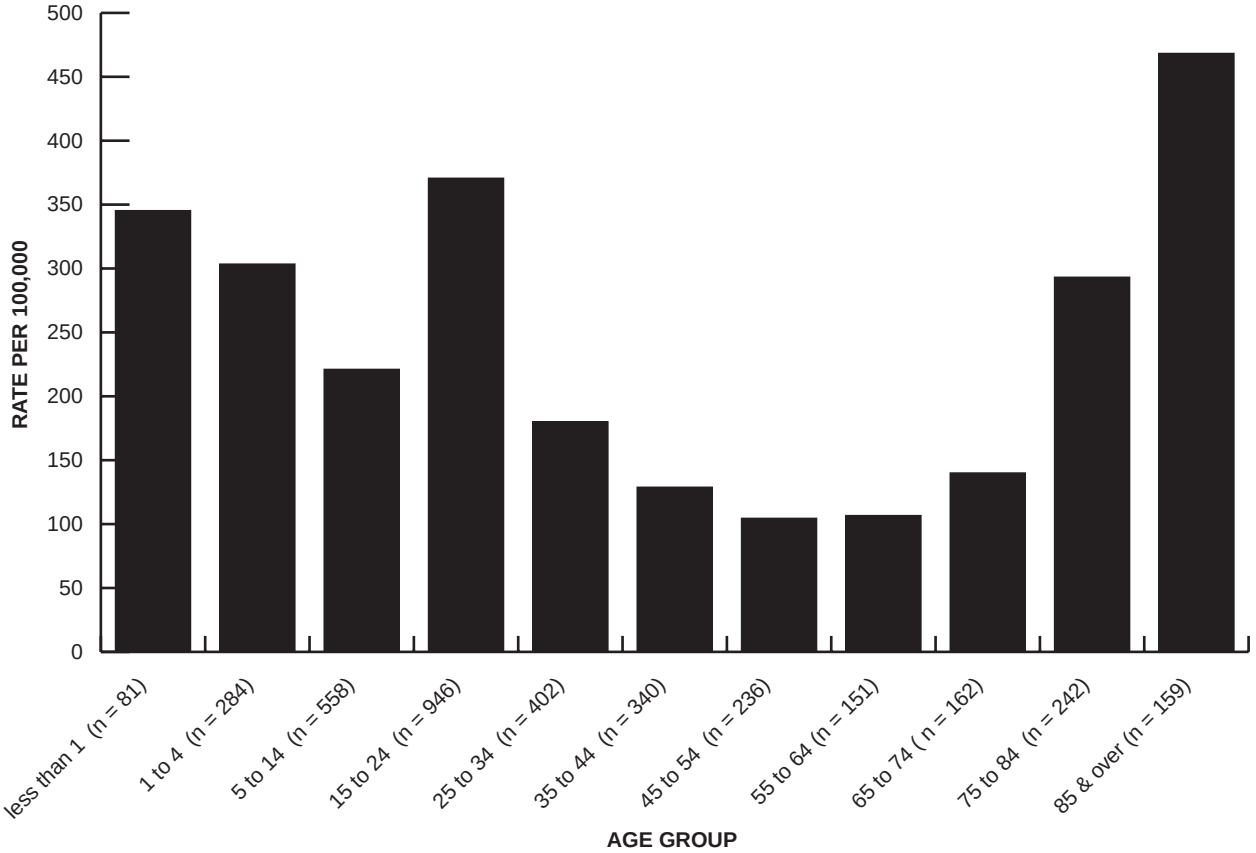
Chart 1.
Nebraska Traumatic Brain Injuries by Cause – 2000
Inpatient and Outpatient



Source: NHHSS TBI Registry, 2000

Adults over the age of 85 had the highest rates of traumatic brain injuries among Nebraskans, followed by the 15 – 24 year age group. (Chart 2) Falls are the leading cause of brain injury among persons age 65 years and older and 5 years of age and under. Transportation-related injuries are the most frequent cause of brain injury among persons ages 5 – 64.[1]

Chart 2.
Nebraska Traumatic Brain Injuries – 2000
Discharge Rates by Age Group



Source: NHHSS TBI Registry, 2000

Significance of the Problem

Brain injuries are among the most likely types of injury to cause death or permanent disability.[2]

The Brain Injury Association estimates that only one-third of traumatic brain injuries are reported. Many are not recognized and not diagnosed resulting in further and more serious injuries. Persons who suffer from TBI may not seek out services due to stigma associated with a TBI.[3]

Repeated mild brain injuries occurring over an extended period of time (i.e., months, years) can result in cumulative neurological and cognitive deficits. Repeated mild brain injuries occurring within a short period of time (i.e., hours, days, or weeks) can be catastrophic or fatal.[2]

After one brain injury, the risk for a second injury is three times greater; after the second injury, the risk for a third injury is eight times greater.[4]

An estimated 15% of persons who sustain a mild brain injury continue to experience negative consequences one year after injury.[2]

Mild traumatic brain injury:

- 80% – 85% of all TBIs are classified as mild.
- Up to 80% of these are not initially identified.
- Estimates say there are 500,000 to 3 million per year in the United States.
- 70% are male; 75% are between the ages of 16 and 35.
- 65% of mild TBI victims were drivers or passengers involved in motor vehicle crashes. Only 24% of those involved were wearing seat belts.
- 51% of mild TBI were intoxicated at the time of their brain injury.
- Most are symptom free by 6-months post injury; however, 20 – 25% report chronic residual symptoms 1 year post injury.[5]

Approximately 1 in 4 adults with a TBI is unable to return to work one year after injury.[6]

The cost of traumatic brain injury in the United States is estimated to be $48.3 billion annually.[4]

The physical and emotional effects of traumatic brain injuries can be substantial, both for patients and for their families. Impairments from brain injury can be divided into three major categories: physical, cognitive and behavioral.

Physical Impairments

- Speech, vision, hearing and other sensory impairments
- Headaches
- Muscle spasticity
- Paralysis
- Problems with sleep

Cognitive Impairments

- Short- and long-term memory deficits
- Slowness of thinking
- Difficulty maintaining attention and concentration
- Impairments of perception, communication, reasoning, problem solving, planning, sequencing and judgement

Behavioral Impairments

- Depression and/or anxiety
- Sexual dysfunction
- Difficulty with emotional control and anger management
- Difficulty relating to others
- Abrupt and unexpected acts of violence[1]

Trends

The risk of having a brain injury is especially high among adolescents and young adults, as well as people older than 75 years. In fact, nationally, males 14 to 24 years of age are at the highest risk for sustaining a brain injury followed by infants and older adults.[1]

For persons of all ages, the risk of brain injury among males is twice the risk among females, due to differences in risk exposure and lifestyle.[1]

Contributing Factors

Numerous factors contribute to traumatic brain injuries.

- Falls are a factor in TBI especially in children and older adults. *(Refer to Older Adult and Childhood Injury chapters.)*
- Failure to use seat belts or child restraint systems. Children 4 – 8 years old are four times more likely to suffer a serious head injury while being restrained in a seat belt rather than a booster seat.[7]
- Lack of helmet use during recreational activities such as bicycling and skateboarding
- Alcohol use—contributes to traffic-related injuries and violence-related injuries as well as others
- Domestic violence
- ATV-related injuries in the U.S. have doubled in a recent five-year period and deaths also continue to climb.[8] Increases in ATV-related injuries and fatalities have been seen in Nebraska as well.
- Firearms also play an important role in head injuries. About five percent of persons who sustain a head injury from which they do not fully recover were injured by a firearm.[9]
- Lack of awareness regarding the seriousness and possible consequences of a concussion or mild TBI.

The National Highway Traffic Safety Administration estimates that for every $10 spent on bike helmets in the United States, $30 in direct health costs are saved, as well as an additional $365 in other costs to society.[10] Bicycle helmets reduce the risk of serious head injury by as much as 85% and the risk of brain injury by as much as 88%. Helmets have also been shown to reduce the risk of injury to the upper and mid-face by 65%.[2] The Behavioral Risk Factor Survey showed that in Nebraska in 1999, 50% of children age 5 – 15 years never wear a bicycle helmet. Twenty-four percent report always wearing a helmet.[10]

Possible Solutions

Preventing falls among children and older adults by modifying the environment to reduce fall hazards and the impact of falls. *(Refer to Falls chapter.)*

Increased safety belt and child safety seat use.

Where possible, reducing medications with side effects that may contribute to falls among older adults.

Increased use of proper protective equipment by athletes and in recreational activities such as skateboarding and bicycling.

Increased use of a standardized procedure for identifying and managing concussions, such as the Standardized Assessment of Concussions tool, by schools.

Training for Emergency Medical Technicians and other medical personnel in the recognition and treatment of TBI.

Educate persons with TBI about steps to ease recovery and about available services.

Recommendations

1. **Increase public education on recognition of fall hazards for children and older adults.**

   Falls are the leading cause of brain injury among persons age 65 years and older and 5 years of age and younger. Modifying the environment to reduce fall hazards and the impact of falls may prevent some of these injuries.

2. **Promote safety belt and child safety seat use.**

   Safety belts are 57% effective in preventing traumatic and fatal brain injuries.[3] When used correctly, child safety seats reduce the risk of death by 71% for infants and by 54% for children ages 1 to 4.

3. **Create an environment that supports upgrading Nebraska's safety belt law.**

   Motor vehicle crashes accounted for 27% of TBI in Nebraska in 2000.[12] Brain and chest injuries are the most frequent cause of death in collisions without seatbelts.[3] States with a primary enforcement safety belt law have a safety belt usage rate that is estimated at 15% higher.[11]

4. **Promote the use of standardized school procedures for identifying and managing concussions, such as the Standardized Assessment of Concussions** (SAC).

   Mild concussions are thought to account for more than 75% of all sports-related brain injuries. Unfortunately, the mild and most frequently occurring injuries are also the most difficult to recognize. The Standardized Assessment of Concussion (SAC) was intended to be a standardized means of objectively documenting the presence and severity of impairment associated with concussion.[13]

5. **Identify a statewide organization (i.e. Nebraska Athletic Trainers Association) to provide training and act as a resource on the Standardized Assessment of Concussion (SAC) or similar tool.**

   There is no statewide point of contact for the SAC. An organization that could act as a resource and remain current with developments around SAC would be of great benefit to schools and others utilizing the tool.

6. **Promote firearm safety awareness.**

   Firearms cause about 10% of all TBIs, but they account for 44% of TBI-related deaths.[2]

7. **Enhance violence-prevention programs designed to decrease the occurrence of self-directed and interpersonal violence.**

   Approximately 7% of TBI in Nebraska are caused by fights/assaults/abuse.[12]

8. **Support Nebraska's current motorcycle helmet use law.**

   A recent NHTSA study showed that motorcycle helmets are 67% effective in preventing brain injuries. A single motorcyclist who sustains a brain injury can cost a state more than $2 million for care and support services over a lifetime.[3]

9. **Promote the use of bicycle helmets as well as the use of helmets for other recreational activities such as horseback riding or skateboarding.**

   Bicycle helmets reduce the risk of serious head injury by as much as 85% and the risk of brain injury by as much as 88%.[6]

10 **Increase public awareness about the seriousness and possible consequences of mild traumatic brain injuries/concussions.**

   Many individuals are unaware of the seriousness of mild TBI/concussions. Concussions and so-called "mild" brain injuries may have life-long affects on mental functioning, personality, emotions, physical symptoms or the quality of life.

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Sexual Assault

Statement of the problem

Sexual assault is forced, manipulated or coerced sexual contact. It includes rape, child sexual abuse, same-sex assault, acquaintance rape, harassment and marital rape. The perpetrator uses sex to inflict physical and emotional violence and humiliation on the victim, or to exert power and control over the victim.

Sexual assault is a crime. Nebraska statutes 28-317 through 28-321 define the acts and terms of sexual assault against adults and children. Though it is a crime, most victims do not report their sexual assaults to the police. National research indicates only 16% of all rapes are reported to law enforcement.[1] The *1997 Nebraska Annual Social Indicators Survey (NASIS)* found similar rates of underreporting in Nebraska. Only 20% of those who identified sexual victimization reported the incident to law enforcement agencies, sought medical treatment or counseling.[2]

Many victims choose not to report their assault to anyone. Research indicates that most people disclose to friends or intimate partners instead of service agencies, including rape crisis centers. However, rape crisis centers have contact with individuals who chose not to seek assistance from law enforcement or medical services. During Fiscal Year 2002, Nebraska's network of sexual and domestic violence programs:

- received 1,103 disclosures of sexual assault;
- answered 2,484 crisis calls from victims of sexual assault and/or harassment;
- answered 468 calls from significant others;
- provided 559 victims with group support;
- provided 141 victims with medical advocacy;
- provided 174 victims with criminal justice support and information; and
- provided 364 victims with community service referrals and information.

Because these numbers represent only a portion of sexual assault victims who seek help, it is difficult to estimate the incidence of sexual assault.

Rape in Nebraska: A Report to the State used data from the National Women's Study and the National Violence Against Women Survey on the prevalence of rape and risk factors for having been raped. This report estimates that approximately 13% of adult women in Nebraska have been victims of one or more completed forcible rapes during their lifetime.[3] This is an underestimate as it includes only adult women who have been victims of forcible rape, excluding men, children, victims of rape that did not include force, and victims of attempted rape.

Significance of the Problem

According to a 1996 National Institute of Justice report, rape was estimated to be the costliest of all crimes with annual victim costs at $127 billion.[4] These costs to society reflect the adverse, long lasting emo-

tional and psychological effects for victims, families, friends, and the entire community. A 1992 study found:

- Victims of sexual violence experience higher rates of depression, anxiety disorders, mental illness, eating disorders, suicidality, and self-esteem problems than non-victims.
- Nearly 1/3 of all rape victims experience Rape Related – Post Traumatic Stress Disorder in their lifetime.
- Rape victims were 4.1 times more likely to contemplate suicide than women who were not victims of crime, and were 13 times more likely to have attempted suicide.
- Twenty six percent of women suffering from bulimia nervosa were raped at some point in their lives while only 13.3% of women who do not have binge eating disorders or bulimia nervosa have been raped.[1]

In addition to affecting primary victims, these crimes also negatively affect the emotional well being of their friends and family and exert an economic impact that affects the entire state of Nebraska. Sexually violent crimes tax our mental health, welfare, victim assistance, and criminal justice systems, and the economy in general.

Trends

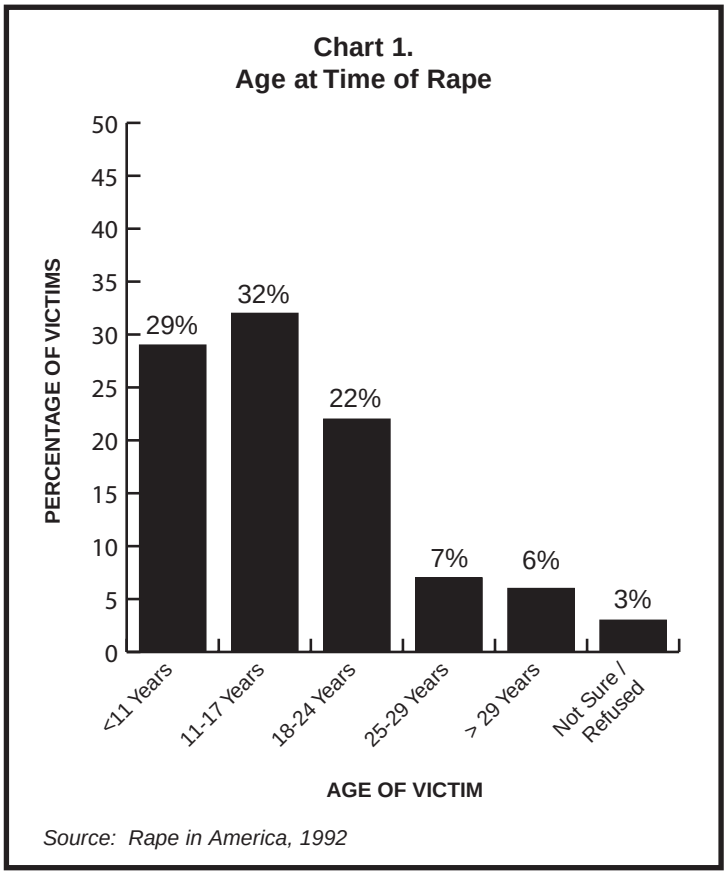
Numerous studies have collectively supported the fact that the rate and trends of sexual assault have remained constant over the last twenty years.[5]

Age

Research has found that a victim of sexual assault is most likely to experience their first sexual victimization before the age of 18.[1]

Predictors

The best predictor of experiencing sexual violence during adulthood is having a prior experience, though the reasons for this correlation have not been determined.[6,7,8,9] This may be linked to a variety of coping strategies commonly used by people who have been traumatized and the characteristics that sex offenders look for in potential victims. For instance, rape survivors are more likely to use drugs and alcohol



than non-rape survivors are[1] and sex offenders often rely on the use of drugs and alcohol to increase victim vulnerability.

Drug and Alcohol Use to Implement Sexual Assaults

National data shows that the majority of sexual assaults on women involve drug or alcohol use by either, or both, the victim and perpetrator.[1] Many sex offenders use alcohol consumption to their advantage, either to lower their own inhibitions or to increase their victim's vulnerability. It may be concluded that a woman's understandable effort to decrease anxiety or forget a prior assault by using drugs or alcohol may in fact make her more vulnerable to future assaults.

Mental Health Disorders

Consistent correlation has been found between surviving sexual violence and the occurrence of mental health disorders including depression, anxiety disorders, post-traumatic stress disorder and suicidality.[1,10,11,12] These disorders can have life altering effects for victims. Similar to the various coping strategies mentioned above, these disorders may increase the likelihood of a sex offender finding a vulnerability to exploit.

Other Vulnerable Populations

Other vulnerable populations include individuals who are institutionalized and subject to an imbalance of/misuse of power by institutional staff, individuals who are undocumented and therefore will not seek social services for fear of deportation, and the developmentally and physically disabled who are highly dependent on others for daily needs.

Male Victims

While the majority of victims of sexual assault are female, males also experience sexual assault. One in six boys are sexually abused before the age of 18[13] and 1 in 33 men have experienced an attempted or completed rape as a child and/or adult.[6] Males are less likely to report the crime due to intensified feelings of guilt, shame, isolation and anger resulting from the social stigma of being a male victim. Societal beliefs about masculinity, vulnerability, and sexual orientation silence many male victims.

Factors that Impact Sexual Assault

Rape Myths

Myths about the incidence of rape, the identity of sex offenders, and the characteristics of victims are believed by people throughout communities, including victims themselves. Some myths make the victim responsible for an assault ("she shouldn't have been drinking / worn that outfit /gone off alone with him / let him in the house/etc.") while others mislead the public about sex offenders ("they aren't people you know, they are mentally ill, look dirty, crazy, are poor, etc.") These inaccurate beliefs feed feelings of shame and self blame by victims, and increase a sense of disbelief among the public at large.

Rape myths create a climate where victims fear that others will respond negatively and discredit or blame them for the assault, resulting in further trauma for the victim. Therefore, victims are not likely to

disclose the incidence of a sexual assault. In the 1992 report, Rape in America, the reasons for not disclosing a sexual assault were given as follows:

- Family knowing (71%)
- Being blamed (69%)
- People outside of family knowing (68%)
- Name being made public (50%)
- Thought nothing could be done (43%)
- Felt it was a private matter (27%)
- Afraid of police response (12%)
- Felt it was not important enough (12%)[1]

Rape myths, although factors, only refer to elements in our culture that reinforce distorted belief systems of sex offenders and others, making it difficult for victims to come forward, be believed, and hold offenders accountable. These myths, in combination with wide social acceptability of alcohol and sex, do not cause sexual assault—they merely enhance a sex offender's ability to sexually offend. Rather, sexual offenders cause sexual assault and for that reason should be held fully accountable.

Sexual Offenders

Sex offender behavior is complex and does not fall into neat categories. Experts believe there to be some common motivations among sexual offenders, but are extremely cautious by emphasizing that no typological system could possibly classify all sex offenders. Offenders differ in motivation, age and gender preferences, preferred types of sexual behavior, intensity of the behavior, attitudes toward sexually offending, the degree of risk, and the need to control their risk.[14]

Research has found that most sexual offenders began their offending prior to the age of 18 and continue the behaviors throughout their lives.[15] Most often, offenders have a large number of victims. Crossover, or the targeting of different types, ages, and relationships of victims, is also quite common.[15,16]

Research shows that sexual offenders who receive lesser sexual assault charges such as exhibitionism or voyeurism may go on to commit more serious offenses or may have already been involved in more serious offenses. A small proportion of perpetrators who begin their criminal sexual careers as exhibitionists will go on to commit rape and child molesting offenses.[14] Therefore, all sexual assault charges need to be treated as serious.

Possible Solutions

All professional providers including doctors, therapists, drug/alcohol treatment providers, etc., be made aware of the correlation between sexual abuse and mental health issues such as eating disorders and substance abuse.

Mental health professionals utilize appropriate screening questions to identify victims of sexual assault and provide appropriate interventions for these clients.

Provide education and public awareness to youth to counteract rape myths.

Change the social norms that reinforce stereotypical rape myths.

Provide the entire community with education on sex offenders and the dynamics of how they groom women and children, rather than education on avoidance techniques specifically indicated for women and children.

Provide the community with education on how to listen, believe, and be supportive of sexual assault disclosures, destigmatizing shame and encouraging victims to get help.

Provide the community with education on how to take action and set community standards of true zero tolerance for sexual assault leading to community ownership of the well-being and safety of all citizens.

Explore the possibility of utilizing the Stop It Now Program, a forum that provides awareness and encouragement for abusers and potential abusers to seek help, as well as support for victims of child sexual abuse and information for friends and families of both victims and offenders.

Recommendations

1. **Increase awareness on the restrictions of the Nebraska law-sex offender registry.**

   The registry needs to include a statement stating most sexual offenders are not identified by this system and, therefore, the best protection of one's self and family is to recognize offenders' grooming behaviors and to believe others when they disclose accounts of sexual victimization.

2. **Increase awareness and publicity of Nebraska law-sex offender registry.**

   Public awareness on who is included and excluded from the registry and the registry process itself needs to be raised. Publicity should be increased by providing information to businesses that adults frequent, such as grocery stores, drycleaners, and banks, in addition to the schools, child care centers, and other areas children frequently reside that currently receive notification.

3. **Explore the possibility of changing our mandatory reporting laws.**

   Current Nebraska laws mandate all citizens, with the exception of clergy, to report disclosures of sexual assault perpetrated against a minor.

4. **Explore the possibility of adding minimum sentences to our statutes.**

   Nebraska does not have mandatory sentencing guidelines for sexual offenses.

5. **Advocate for extending or eliminating the statutes of limitations for adult and child victims.**

   Currently, Nebraska has a statute of limitations for reporting sexual crimes.

6. **Advocate for revamping the type of sex offender treatment provided in Nebraska.**

   Examine options such as court-mandated treatment for lesser sexual assault offenses such as exhibitionism or voyeurism, state standards for sex offender treatment providers, and the incorporation of polygraphs in treatment and monitoring.

7. **Involve advocates in the community supervision of sex offenders on probation or parole.**

   Advocates can provide support to known victims and to new victims the offender identifies during treatment, outreach to the non-offending members of the offender's family, education about sex offenders to the community, and can act as a liaison between victims and probation/parole to enhance victim safety.

8. **Establish more rape crisis centers statewide.**

   Currently, there are only 22 member programs in Nebraska's network of sexual and domestic violence programs. Some programs serve very large areas of the state, ranging from four to eight counties served per program. In order for victims to receive sufficient, timely support, more rape crisis centers need to be established across the state.

9. **Increase funding for sexual assault prevention and include sexual assault intervention and support services.**

   Prevention, intervention, and on-going support must coexist to be effective in reducing sexual assault.

10. **Encourage the media to be accountable when reporting accounts of sexual assault.**

    The media should provide in-depth investigative reports, and address reporting rates, arrests, and prosecution rates for sexual assault. Their focus should be offender responsibility, illustrating the issue as a societal problem rather than as isolated crimes.

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DOMESTIC VIOLENCE

Statement of the Problem

Domestic violence, also referred to as intimate partner violence, is a pattern of assaultive and coercive behaviors, including physical, sexual, and psychological attacks, as well as economic coercion that adults or adolescents use against their intimate partners. It differs from other forms of family violence, such as child abuse or elder abuse in that it takes place in the context of a "theoretically" peer relationship. Some acts of domestic violence are illegal (i.e., hitting, strangling, forcing sex, threats, etc…) while other behaviors do not constitute illegal conduct (i.e., degrading comments, controlling family finances, denying access to health care, etc…).[1]

As a result of a 1997 Nebraska law, law enforcement agencies were required to begin reporting if an aggravated or simple assault was domestic-related. This indication was also required for any corresponding arrest. Assault is an unlawful attack by one person upon another for the purpose of inflicting harm or injury. According to the Nebraska Crime Commission, domestic assault is defined by state statute as "relating to family or household members and includes spouses, ex-spouses, children, persons who are residing together, persons who have resided together in the past, persons who have a child in common, or persons related by consanguinity or affinity."

Domestic violence/sexual assault programs in the Nebraska Network of Domestic Violence Sexual Assault Programs answered 51,795 domestic violence calls during the time from July 2001 to June 2002.[1]

During 1999, there were a total of 3,807 domestic assaults reported to Nebraska law enforcement agencies outside the city of Omaha. A total of 3,102 arrests were reported for domestic assaults in Nebraska in 1999.[2] The number of arrests is likely an under-representation of incidents; the number of convictions is far less than total arrests. These numbers under represent the scope of the problem of domestic violence.

> Among Nebraska adolescents, grades 9 – 12, 7% of the males and 8% of the females report being hit, slapped, or physically hurt by their boyfriend or girlfriend during the previous 12 months.[3]

Significance of the Problem

The National Crime Victimization Survey found that only about one-half of all incidents of intimate partner violence against women were reported to law enforcement in 1993-1999. A 1995 U.S. Bureau of Justice Statistics report indicates that 8 to 12 percent of women experience some form of partner violence in any given year.[2]

Program statistics from the Nebraska Domestic Violence Sexual Assault Coalition also suggest strongly that domestic violence is much more prevalent than law enforcement statistics show. For example, in 2002, the Coalition reported that Nebraska's network of domestic violence and sexual assault programs provided shelter, counseling, advocacy, and other services to 10,870 women and children who sought relief from physical, emotional and sexual violence.[1]

There is a strong correlation between domestic violence and child abuse or neglect. Domestic violence and child maltreatment often occur simultaneously. Problems resulting from children who witness domestic violence have recently gained national attention, showing that the overlap of violence in families is common. The following demonstrates the impact of domestic violence on children:

- 50% of men who frequently abused their wives also frequently abused their children
- Domestic violence is the single major precursor to fatal cases of child abuse or neglect
- The rate of child abuse by battered women is at least double that of mothers not being beaten by a partner
- Men who witnessed domestic violence as a child were twice as likely to be abusive toward a partner than men who did not witness domestic violence
- 50% of all homeless women and children in the U.S. are fleeing domestic violence.

In 2000 in Nebraska, there were 1,932 substantiated child abuse or neglect reports substantiated involving 3,074 children.

These facts point to the need for child protection and safety workers and battered women's advocates to work together for families.[4]

Domestic violence and the workplace:

- Domestic violence costs employers, nationwide, $3-$5 billion annually.
- 1 out of every 4 victims will lose their job.
- 56% of victims are routinely late for work.
- 74% of victims are harassed on the job.
- 54% of victims miss more than 3 days of work every month.
- A victim's place of employment is the number one place women are murdered by their intimate partners.

- About 25% of workplace problems, such as absenteeism, lower productivity, turnover, and excessive use of medical benefits result from family violence.
- A national survey showed that 94% of corporate security directors ranked domestic violence as a high security problem at their company.[1]

Trends

There seems to be heightened awareness around the issue of domestic violence among the medical community, law enforcement, and social service providers. The topic of domestic violence is included in the training of health care providers and law enforcement; this training should continue.

Community collaborations including the medical community, law enforcement and social service agencies have increased.

The majority of domestic violence victims are women; however men can also be victims.

Factors That Impact Domestic Violence

It is important to note that, while some factors may increase an individual's vulnerability or risk, domestic violence knows no barriers. It can occur in any socioeconomic group, ethnic group, etc.

Alcohol and drug use as a factor:

- While it may be present in many domestic violence situations, alcohol or drugs do not cause someone to be violent. Alcohol or drugs can make a violent person more violent and abusers often use alcohol or drugs as an excuse for their violence.
- In spite of the high correlation between substance abuse and domestic violence, batterer's experts report that, while the alcohol or drugs might act as a disinhibitor, they do not cause the violence.
- The belief that the violence will stop once the drinking or drug use stops is usually not borne out.
- Substance abuse is neither a necessary nor a sufficient condition for domestic violence.
    - ♦ 50% – 70% of substance abusers in treatment are batterers.
    - ♦ However, 75% of batterers are not using when they batter.
    - ♦ Violence is a choice, whether using or not.[1]

Factors that may increase an individual's vulnerability or risk include isolation, poverty, lack of family support, lack of social support, feeling trapped, or being unfamiliar with the community. Some of these risks may be heightened in the rural areas of the state.

Societal barriers:

Many attitudes and/or myths are rooted in popular culture and are reinforced by the media: the idea of "male privilege", the desensitization to violence—we are conditioned not to recognize violence.

Inconsistencies in the response to domestic violence by the justice system, health care providers, law enforcement, and social service providers can be a barrier to identification and treatment.

Inherent barriers to intimate partner violence identification and intervention common in rural communities include practitioner factors, such as personal and professional relationships with victims and abusers, and patient factors including poverty, lack of health insurance, limited access to resources that may facilitate leaving an abusive relationship, and geographic and social isolation.[5]

Possible Solutions

A well thought-out screening tool which is used universally with all female patients by all physicians including, but not limited to, family practice physicians, OB/GYNs, nurses, dentists, and other health care providers who have contact with women and children, and in the ER. The tool should be brief and used routinely.

All agencies set policy and procedures for responding to domestic violence that respects victim rights and confidentiality, and takes into account victims' safety and assessment of situation.

Develop a protocol to create a coordinated response between agencies that come into contact with victims of domestic violence.

Recommendations

1. **Increase funding for education and public awareness.**

   Education is the key to prevention. Without it, we can't sufficiently or successfully address the problem of domestic violence in our society. It is important for people to understand the true nature of domestic violence and the myths that surround it.

2. **Educate physicians and billing staff on proper use of ICD-9 and E-codes to provide accurate data.**

   Hospital discharge data, which utilizes ICD-9 and E-Codes, provides an opportunity for comprehensive data retrieval. This data is very useful in the planning and evaluation of prevention efforts.

3. **Encourage mandatory routine screening for domestic violence of all female patients by health care providers. Develop a standardized protocol to both positive and negative screening.**

   The Joint Commission on Accreditation of Healthcare Organizations recommends that this be done; it should be expanded to include all health care settings such as clinics, etc. A coordinated response to positive screenings must be developed to go along with the screening.

4. **Provide education/create awareness among employers on the issue of domestic violence and workplace safety and the economic impact. Encourage employers to develop a protocol.**

   Domestic violence should be addressed in workplace safety plans in places of employment.

5. **Increase public awareness of the true nature of domestic violence and its effects.**

   Public awareness efforts should address the attitudes of society and the many myths surrounding

domestic violence. Domestic violence affects not just the victim, but their families, their community, and the entire society.

6. **Increase public awareness of resources that are available.**

   A wide range of services, ranging from crisis lines to legal services, exist for victims of domestic violence. Many times victims may not be aware of the help that is available. The Nebraska Domestic Violence/Sexual Assault Coalition is a statewide resource that can provide referrals to local programs.

7. **Provide education/create awareness among the systems that work with victims of domestic violence.**

   Better education leads to better services. For example, more education could lead to enhanced responses by health care, enhanced service provisions by crisis centers, proper investigation by law enforcement, and proper prosecution and sentencing of batterers by the justice system.

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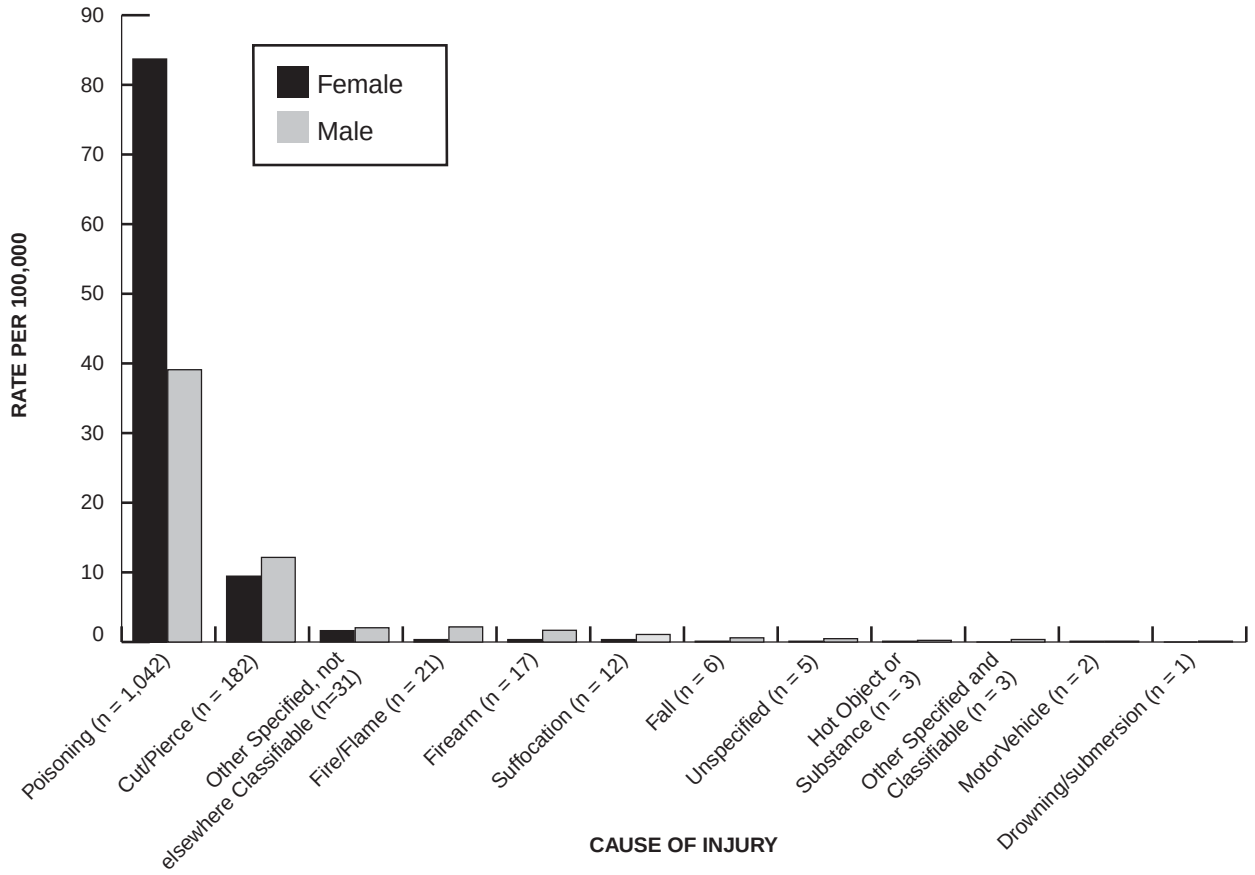
SUICIDE

Statement of the Problem

One of the limitations of looking at the data for suicide is that the numbers are relatively small. Suicide is a low base rate phenomenon. One death in a small county or among a specific age group in the state can significantly impact the rate among that particular group.

Nebraska 2001 Hospital Discharge Data shows 762 inpatient hospitalizations due to suicide attempts. Of these, 67% were females and 33% were males.[1] Poisoning was the most common method for those who were treated at hospitals, both inpatient and outpatient. (Chart 1)

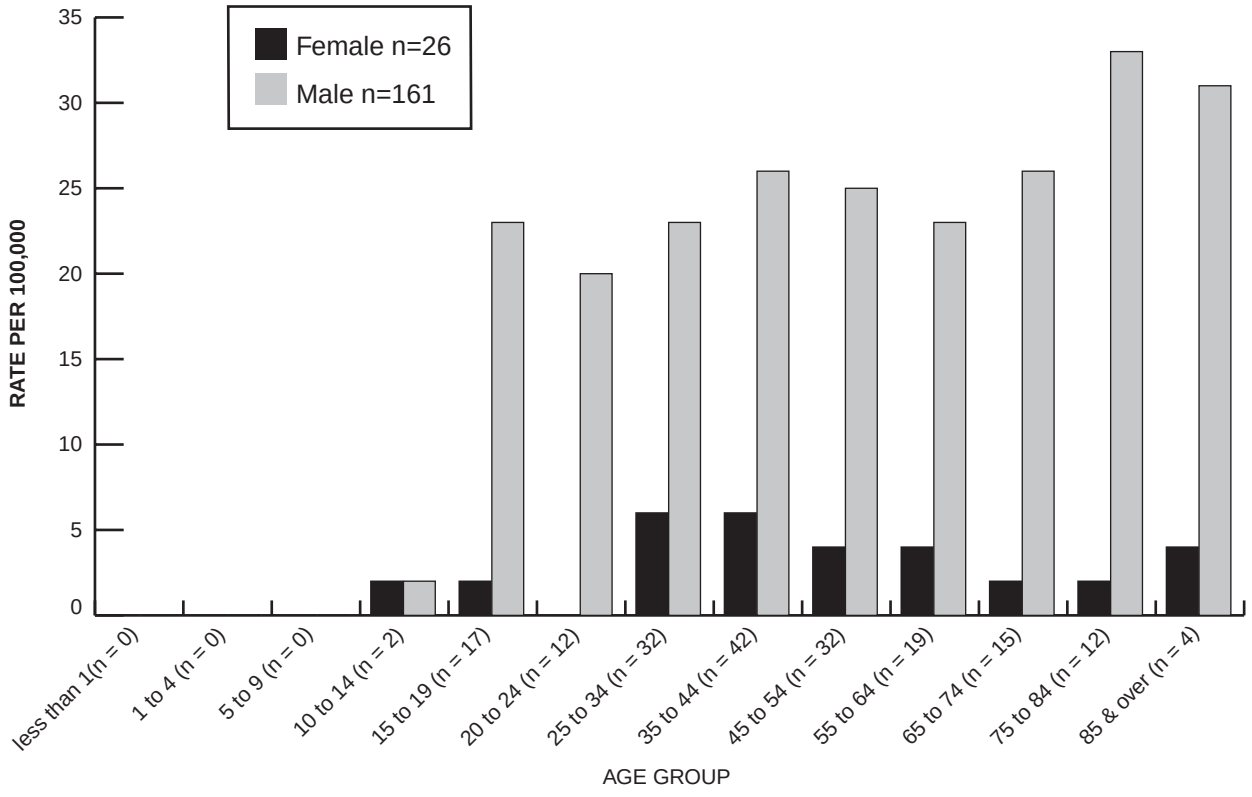
Chart 1.
Self-Inflicted Injury, Nebraska, 2001
Inpatient and Outpatient Discharge Rates by Gender



Source: NE Hospital Discharge Data, 2001

There were 187 completed suicides in 2001 in Nebraska. Males in all age groups over age 15 years were much more likely to complete suicide. (Chart 2) Females accounted for approximately 14%, while males accounted for 86% of completed suicides.[2]

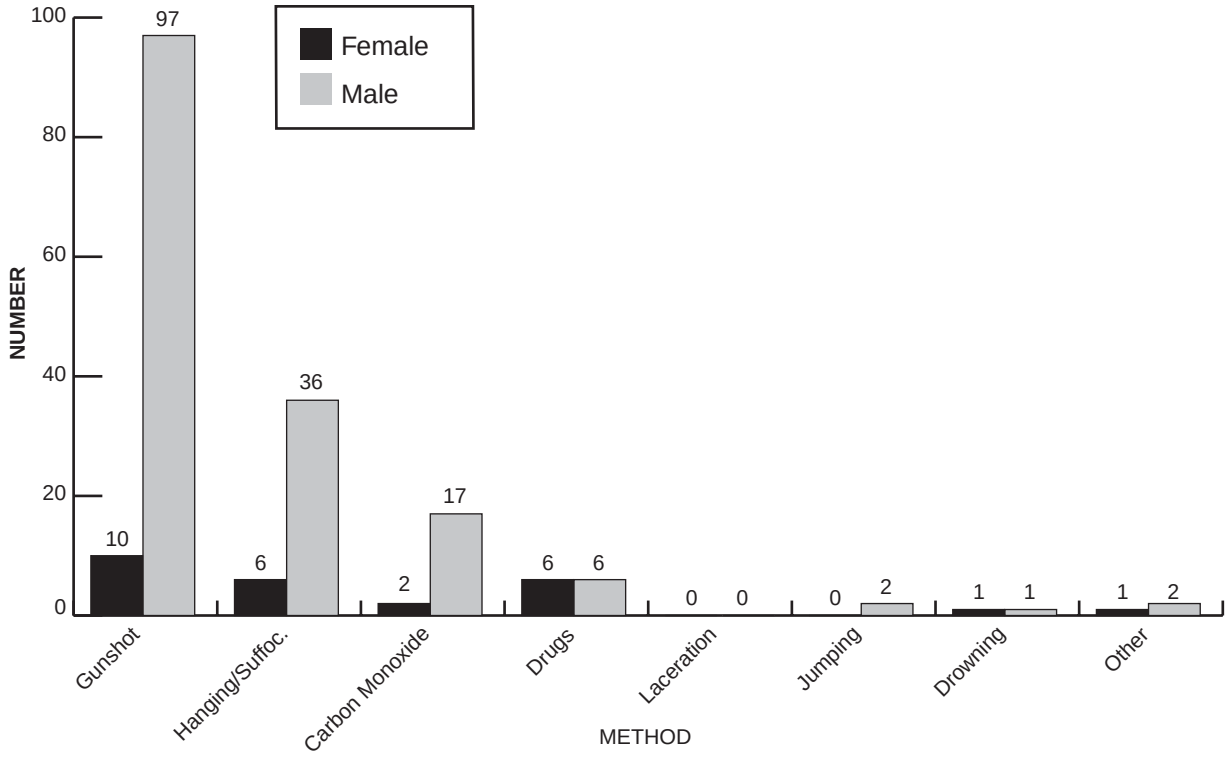
Chart 2.
Nebraska Suicide Deaths – 2001
Rates by Age and Gender



Source: NHHSS Vital Statistics, 2001

Of those who completed suicide, gunshot was the most common method. (Chart 3)

Chart 3.
Type of Suicide Deaths – Nebraska 2001



Source: NHHSS Vital Statistics, 2001

Significance of the Problem

In Nebraska in 2000, there were 6,127 years of potential life lost to suicide. This is 23.1% of the years potential life lost to injury before age 75. Suicide ranks second only to motor vehicle crashes as a cause of years of potential life lost in Nebraska.[3]

Since 1933, the first year States began reporting deaths, adults age 65 and older have had the highest suicide rate of all age groups. While older adults make up 13% of the U.S. population, they account for nearly 20% of suicide deaths. Suicide rates tend to rise with age and are highest among white men 65 and older.[4]

The rate of youth suicides has tripled since the 1950s and today, suicide is the third leading cause of death for 15- to 24-year-olds.[4]

Trends

There are four female attempts for every male attempt. However, there are more males who complete suicide.

Generally, young people are more likely to attempt suicide, while older adults are more likely to complete suicide.

Among youth age 15 to 19, boys were five times as likely as girls to suicide; among 20- to 24-year olds, males were seven times as likely as females to suicide.[4]

In Nebraska, men age 85 and over are overrepresented in suicide rates.[2]

Married couples have the lowest suicide rate.

> Suicide rates appear to rise during a farm crisis, indicating there may be a relationship between the economy and suicide.

The largest peaks in suicide rates in the last 85 years are related to economic downturns; in Nebraska that is specifically related to the farm economy. This is often weather related such as during a drought.

Contributing factors

Suicide Risk Factors

- Previous suicide act
- Mental disorders—particularly mood disorders
- Co-occurring mental and alcohol and substance abuse disorders
- Family history of suicide
- Hopelessness
- Impulsive and/or aggressive tendencies
- Barriers to accessing mental health treatment
- Relational, social, work, or financial loss
- Physical illness
- Easy access to lethal methods, especially guns
- Age, culture, lack of connectedness
- Substance abuse

Suicide Warning Signs

- Talking, reading or writing about death
- Visiting or calling people to say goodbye
- Giving things away or returning borrowed items
- Talking about feeling hopeless or worthless
- Self-destructive or reckless behavior
- Significant changes in behavior

Protective factors include:

- Getting help for mental, physical and substance abuse disorders

- Restricted access to highly lethal methods of suicide—especially firearms
- Family and community support
- An established relationship with a doctor, clergy, teacher, counselor or other professional who can help
- Connectedness to community, family, friends[5]

Alcohol can be a contributing factor; 25% of alcoholics attempt suicide, 18% complete. States with the most restrictive alcohol policies have the lowest suicide rates.[6]

Possible Solutions

Public awareness of risk factors.

Public education about the availability of resources for suicide prevention and intervention.

Media awareness: make the media aware of its impact.

Recommendations

1. **Support the efforts of the Nebraska State Suicide Workgroup and the Southeast Nebraska Suicide Prevention Project. The State Suicide Prevention Plan includes these goals:**

   - ♦ Promote awareness that suicide is a preventable public health problem.
   - ♦ Develop and implement strategies to reduce the stigma associated with being a consumer of mental health, substance abuse, and suicide prevention services.
   - ♦ Support the development of suicide prevention programs, especially programs targeted toward populations at heightened risk for suicide.
   - ♦ Implement training for recognition of at risk behavior and delivery of effective treatment.
   - ♦ Develop and promote effective clinical and professional practices.
   - ♦ Improve and expand surveillance systems. Make suicide a reportable condition.
   - ♦ Promote and support research on suicide and suicide prevention.

2. **Disseminate information to the media about ways to report suicide appropriately.**

   Encourage responsible reporting of suicide by the media to lessen the risk of suicide contagion in the community.

3. **Support the needs of suicide survivors.**

   Survivors are at heightened risk for suicide. Increase availability and access to services and support for the survivors.

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APPENDICES

Appendix A

Definition of Terms

Age Adjusted Rate: A rate that has been standardized for age distribution so that it is independent of the age structure of the population. A procedure is used to minimize the effects of differences in age composition when comparing rates for different populations.

BAC (Blood Alcohol Concentration): The amount of alcohol in the blood expressed as a percentage.

DUI (Driving Under the Influence): Violation for a driver impaired by alcohol or any drug operating a motor vehicle.

E-code: External cause of injury codes that are listed in the ICD-9-CM. They tell how an injury occurred.

ICD-9-CM International Classification of Disease (ICD), 9th revision, Clinical Modifications. This defines and lists Ncodes, Ecodes, and diagnosis codes and was developed by the National Center for Health Statistics.

Inpatient: Individuals in hospital care for longer than 24 hours, including inpatient, admittees and roll-over status.

Intentional Injury: Two categories including self-inflicted and assaultive. Self-inflicted injuries are purposely inflicted upon one's self as in the case of suicide attempts. Assaultive injuries are purposely inflicted upon another person as in the case of homicide or child abuse.

N-codes: Nature of injury codes, listed in the ICD-9-CM, that describe the type of injury that was received.

Other specified and classifiable: Injuries that may include foreign body entering eye or orifice, caught accidentally in or between objects, accident caused by explosive material, accident caused by electric current, exposure to radiation or late effects of accidents.

Outpatient: Individuals in hospital care for less than 25 hours including outpatient and short stay status.

Rate: The number of new cases per 100,000 population.

Unintentional Injury: Commonly referred to as an "accident". These are injuries that are not purposely inflicted by self or others.

Appendix B

Injury Prevention Resources

Injury Prevention Program
Nebraska Health and Human Services
PO Box 95044
301 Centennial Mall South
Lincoln, NE 68509
(402) 471-2101
Resources: general injury prevention information, injury data

Childhood Injuries

Nebraska SAFE KIDS Coalition
Jeanne Bietz
Nebraska Health and Human Services
PO Box 95044
301 Centennial Mall South
Lincoln, NE 68509
(402) 471-2101
Resources: General childhood injury prevention information including child passenger safety, bike helmets, fire prevention

Tri-Cities SAFE KIDS Coalition
(Grand Island, Hastings, Kearney)
Ann King, Rnc
Saint Francis Medical Center
2620 Faidley Ave.
Grand Island, NE 68803
308-398-6584
E-mail: safekids@sfmc-gi.org

Hastings SAFE KIDS
Carol Hamik, Rnc
Mary Lanning Memorial Hospital
402-461-5810
E-mail: mh35727@alltel.net

Kearney SAFE KIDS
Karen Triplett
Good Samaritan Health Services
308-865-2011
E-mail: karentriplett@catholichealth.net

Lincoln-Lancaster SAFE KIDS Coalition
Brian Baker
Lincoln-Lancaster County Health Department
3140 N Street
Lincoln, NE 68510
402-441-8046
E-mail: bbaker@ci.lincoln.ne.us

SAFE KIDS of North Central Nebraska
Kate Kunz , LPN-C
Chapter representing Rock, Boyd & Holt Counties
Avera St. Anthony's Hospital
223 E. Adams
O'Neill, NE 68763
402-336-2611
Email: kate.kunz@avera-sta.org

SAFE KIDS of Prairie Valley
Annette Alt and Gwen Sander
Chapter representing Platte, Colfax, Nance, Polk, Butler, Boone Counties
Columbus Community Hospital
P.O. Box 1800, 4600 38th Street
Columbus, NE 68601
402-562-3380
Email: amalt@columbushosp.org

SAFE KIDS of Seward County
Traci Clouse
Seward Memorial Hospital
300 N. Columbia
Seward, NE 68434
402-643-2971
Email: mhcscarseats@alltel.net

SAFE KIDS of South Central Nebraska
Verlene Watson, RN
Chapter representing Nuckolls, Webster, Clay, Thayer Counties
Brodstone Memorial Hospital- Good Beginnings
520 East 10th
Superior, NE 68978
402-879-3281
Email: verlenew@email.com

SAFE KIDS of Western Nebraska
Michelle Weimer
Chapter representing Scotts Bluff County
1730 12th Street
Gering, NE 69341
308-436-8040
Email: mdweimer@prairieweb.com

National Program for Playground Safety
University of Northern Iowa
School of Health, Physical Education & Leisure Services
Cedar Falls, Iowa 50614
(800) 554-PLAY
www.uni.edu/playground
Resources: Playground safety information on the web site, videos, CDs & brochures available to order

Fire and Burns

State Fire Marshal
246 South 14th Street
Lincoln, NE 68508
(402) 471-2027
Resources: Fire prevention information and programs, video library, Juvenile Firesetter's Program, Risk Watch program, smoke detectors

St. Elizabeth Regional Burn Center
555 South 70
Lincoln, NE 68510
(402) 219-7680
Resources: Educational offerings to the public with specialized offerings to pre-hospital care providers, nurses and physicians upon request to Ruth Albrecht, RN, BSN, Burn Education Program Coordinator (402) 219-7768 or email ralbrecht@stez.org

Poisoning

Nebraska Regional Poison Center
8401 Dodge St, Suite 115
Durham Plaza
Omaha, NE 68114
Resources: Poison prevention presentations and educational materials, video tape loan library
800-222-1222
www.poison-center.com

Domestic Violence/Sexual Assault

Nebraska Domestic Violence Sexual Assault Coalition
825 M Street, Suite 404
Lincoln, NE 68508
(402) 476-6256
800-876-6238 24-hour Domestic Violence/Sexual Assault Hotline
Referral/contact information to Crisis centers/ Programs statewide
www.NDVSAC.org

Traffic-Related

Nebraska Office of Highway Safety
301 Centennial Mall South
PO Box 94612
Lincoln, NE 68509
(402) 471-2515
www.dmv.state.ne.us/highwaysafety
Resources: Maintains a resource library including numerous traffic safety topics, provides Nebraska and national crash statistics, educational materials, provides funding assistance through grants for traffic safety related projects aimed at reducing crash related deaths and injuries.

MADD
Mothers Against Drunk Driving
Nebraska State Organization
800 South 13th Street
Lincoln, NE 68508
(800) 444-MADD
www.maddnebr.com

Older Adults

Area Agency on Aging
Eight Area Agency on Aging offices provide access services, in-home services, community services, and caregiver services in Nebraska. Their responsibilities include technical assistance, training at the local level, legislative interaction and area-wide education and public information.

Eastern Nebraska Office on Aging
4223 Center Street
Omaha, NE 68105
(402) 444-6444
Serving Cass, Dodge, Douglas, Sarpy and Washington Counties

Lincoln Area Agency on Aging
1001 O Street, Suite 101
Lincoln, NE 68508
(402) 441-7022
LIFE (402) 441-4040, (800) 247-0938
Serving Butler, Fillmore, Lancaster, Polk, Saline, Saunders, Seward, and York Counties

Northeast Nebraska Area Agency on Aging
P.O. Box 1447, 119 Norfolk Ave.
Norfolk, NE 68702
(402) 370-3454, (800) 672-8368
Serving Antelope, Boone, Boyd, Brown, Burt, Cedar, Cherry, Colfax, Cuming, Dakota, Dixon, Holt, Keya Paha, Knox, Madison, Nance, Pierce, Platte, Rock, Stanton, Thurston, and Wayne Counties

South Central Nebraska Area Agency on Aging
Suttle Plaza, 4623 2nd Ave., Suite 4
P.O. Box 3009
Kearney, NE 68847
(308) 234-1851, (800) 658-4320
Serving Blaine, Buffalo, Custer, Franklin, Furnas, Garfield, Greeley, Harlan, Kearney, Loup, Phelps, Sherman, Valley, and Wheeler Counties

Midland Area Agency on Aging
P.O. Box 905, 305 N Hastings, Room 202
Hastings, NE 68902
(402) 463-4565 (800) 955-9714
Serving Adams, Clay, Hall, Hamilton, Howard, Merrick, Nuckolls, and Webster Counties

Blue Rivers Area Agency on Aging
Gage County Courthouse, Room 24
Beatrice, NE 68310
(402) 223-1352, (800) 659-3978
Serving Gage, Jefferson, Johnson, Nemaha, Otoe, Pawnee, Richardson, and Thayer Counties

West Central Nebraska Area Agency on Aging
120 W 2nd Street
North Platte, NE 69101
(308) 535-8195, (800) 662-2961
Serving Arthur, Chase, Dawson, Dundy, Frontier, Gosper, Grant, Hayes, Hitchcock, Hooker, Keith, Lincoln, Logan, McPherson, Perkins, Red Willow, and Thomas Counties

Aging Office of Western Nebraska
Bluffs Business Center
1517 Broadway, Suite 122
Scottsbluff, NE 69361
(308) 635-0851, (800) 682-5140
Serving Banner, Box Butte, Cheyenne, Dawes, Deuel, Garden Kimball, Morrill, Scotts Bluff, Sheridan, and Sioux Counties

Suicide

Southeast Nebraska Suicide Prevention Project
Denise Bulling
University of Nebraska Public Policy Center
dbulling@nebraska.educ
Dave Miers
Bryan LGH Medical Center
dave.miers@bryanlgh.org

Nebraska State Suicide Prevention Plan
Nebraska Health and Human Services
George Hanigan, Deputy Director
PO Box 98925
Lincoln, NE 68509
402-479-5126
http://www.hhs.state.ne.us/beh/mh/suicide.htm

Agiculture-related

Progressive Agriculture Foundation
Progressive Farmer Farm Safety Day Camps
Bernard Geschke - Program Specialist
8502 Makaha Circle
Papillion, NE 68046
888-257-3529
E-mail: farmsafetydaybg@aol.com
Resources: brochures, manuals, classroom curriculums and hands-on activities for kids

Nebraska Rural Health & Safety Coalition
Beth Horak - Rural Safety Coordinator
1118 County Road N
Western, NE 68464
402-821-2036
E-mail: horak5@diodecom.net
Resources: brochures, manuals, classroom curriculums and hands-on activities for kids

Farm Safety 4 Just Kids
Beth Horak - Outreach Coordinator
110 S. Chestnut Ave., Box 458
Earlham, IA 50072
800-423-5437
Resources: brochures, manuals, classroom curriculums and hands-on activities for kids

Web Sites

AAA Foundation for Traffic Safety
www.AAAfoundation.org

American Association of Suicidology
www.suicidology.org

American Burn Association
www.ameriburn.org

Consumer Product Safety Commission
www.cpsc.gov

MADD (National Organization)
Mothers Against Driving Drunk
www.madd.org

National Brain Injury Association
www.biausa.org

National Center for Injury Prevention and Control
Centers for Disease Control and Prevention
www.cdc.gov/ncipc

National Children's Center for Rural and Agricultural Health and Safety
http://research.marshfieldclinic.org/children/

National Fire Protection Association
www.nfpa.org

National Highway Traffic Safety Administration
www.nhtsa.dot.gov

National SAFE KIDS Campaign
www.safekids.org

National Safety Council
http://nsc.org

National Strategy for Suicide Prevention
http://www.mentalhealth.org/suicide prevention/strategy.asp